

## ABSTRACT

Title of Dissertation: EVALUATING THE EFFECT OF STATE  
TITLE IX POLICIES ON COLLEGE  
CAMPUSES THROUGH DIFFERENCE-  
IN-DIFFERENCES INVESTIGATION

Christine A. Licata-Hoang, Doctor of  
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Dissertation directed by: Dr. Marvin A. Titus, Associate Professor,  
Department of Counseling, Higher  
Education and Special Education

One in five women and one in 15 men will experience sexual assault while enrolled in college. Rates of sexual assault in higher education have remained relatively constant over the past 50 years (Cantor et al., 2020). Nevertheless, the industry has seen a resurgence of focused pressure to eradicate the issue more effectively. Despite several decades of excellent work on campus sexual violence and higher education policy research, scholars have not addressed the intersection of these two areas to explore state-level outcomes. This study examines a new pathway of policy research focused on the effect of state-level Title IX policies on sexual assault incident reports on college campuses within the United States. Using difference-in-differences regression techniques, principal-agent theory (Kivisto, 2005; Lane & Kivisto, 2008), and the policy adoption framework (Hearn et al., 2017), the purpose of this research is to determine the effect of

state-level Title IX laws on the frequency of recorded incident reports at four-year public institutions of higher education between 2010 and 2019. This research utilizes data from IPEDS and the U.S. Department of Education. California and New York serve as the two treatment cases in the study. Each state is compared to regional compact or neighboring states and a national set of never-adopting states. This study examines the policy's average treatment effect over ten years, as well as year-to-year, to uncover the policy effect from enactment to normalized implementation. Ultimately, this study illuminates the efficacy of these state-level Title IX policies and determines whether the policy serves as a valuable intervention tool to eradicate campus sexual violence.

**EVALUATING THE EFFECT OF STATE TITLE IX POLICIES ON COLLEGE  
CAMPUSES THROUGH DIFFERENCE-IN-DIFFERENCES INVESTIGATION**

by

Christine A. Licata-Hoang

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Advisory Committee:

Dr. Marvin Titus, Chair  
Dr. Sharon Fries-Britt  
Dr. Andrea Goodwin  
Dr. Andrew Louder  
Dr. Peter Steiner

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## **Dedication**

To the survivors of sexual violence, the champions who have persevered.  
Your selflessness, generosity, and grit in sharing your experience  
make the pursuit of knowledge and prevention possible.

To those whom we have lost, we will never forget.

“There comes a point where we need to stop just pulling people out of the river.  
We need to go upstream and find out why they're falling in.” -Desmond Tutu

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## CHAPTER ONE INTRODUCTION

One in five women and one in 15 men will experience sexual assault while enrolled in college (Black et al., 2011; Karjane et al., 2005; Muehlenhard et al., 2017; Smith et al., 2018). Sexual assault in higher education has remained a phenomenon of continued interest, and in the last decade, has seen a resurgence of focused pressure to eradicate the issue more effectively. When the federal government published a stance on the relationship between education and sex discrimination, it did so through the Higher Education Amendment of 1972 by introducing Title IX (Jessup-Anger et al., 2018). Originally intended to bring sex equity to collegiate admissions, Title IX was made famous to level the playing field of collegiate sports (Marine, 2019). The federal government has since attempted to address campus sexual assault through many legislative actions: the Clery Act, Violence Against Women Act, and the Victim Bill of Rights<sup>1</sup>. Under President Barack Obama's administration, guidance titled the "Dear Colleague Letter" formally tied sexual violence to sexual harassment and sex discrimination and established a direct link to Title IX (Ali, 2011). Title IX directly connects federal funding to institutional compliance, requiring colleges and universities to provide an education free of sex discrimination and sexual violence (Boba & Lilley, 2009; Title IX of the Education Amendments of 1972, 1972; *Violence Against Women Act of 2013*, 2013).

Although regulatory guidance and the law addressing sexual misconduct<sup>2</sup> stem from the federal government, a new trend in higher education is emerging: state control or mandates to reduce and eliminate sexual misconduct on the college campus. Recently, some state legislators implemented policy mimicking the federal order - requiring a policy, set protocol, and

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<sup>1</sup> Each piece of legislation pertaining to advancing the national conversation of sexual violence will be explored in greater detail in this chapter.

<sup>2</sup> Throughout this paper, sexual violence and sexual misconduct are used interchangeably.

preventative measures addressing campus sexual violence to be in place to receive state funding. There has been a groundswell initiative by states to create this type of policy, as almost half have a state-level Title IX law currently in effect (Whinnery et al., 2019). California and New York are two states with this type of statute longest in effect, with its enactment in 2014 and 2015, respectively (Education Commission of the States, n.d.). Although states might surmise anecdotal evidence of impact, this type of state-level policy's effect and value is not yet known nor empirically studied.

This study examines the effect of these state-level laws on the incident reporting rates at four-year public institutions to more accurately understand if this is a relevant tool to help eradicate campus sexual violence. The early adopters and non-adopters provide a natural experiment where difference-in-differences (DID) estimation techniques can begin to identify the effect of the policy's presence on reported incidents of sexual misconduct. To situate this study, prior empirical and theoretical research will provide some context for understanding the need for understanding the policies' effects. No known empirical research examining campus sexual assault policy at the state level currently exists in the academic literature. Simply, the policy's presence could affect the reporting of incidents in institutions in the following ways: 1) no change in sexual misconduct incident reports at the institutional level; 2) an increase in sexual misconduct reports; or 3) a decrease in sexual misconduct reports. This study's theoretical framework explains the policy adoption context of the treatment states and examines the relationship between the state legislatures and institutions required to implement the policy. The policy adoption and diffusion model (Hearn et al., 2017) and principal-agent theory (Lane & Kivisto, 2008) are used to hypothesize whether a state-level Title IX mandate can be an effective policy lever. Uncovering the policy's causal effect can more strategically shape future decisions

on this pressing issue in higher education on the state level, expanding the knowledge of campus sexual assault beyond the individual or institutional levels of focus.

### **Background of the Problem**

Title IX was introduced through the Higher Education Amendments of 1972 to bar entities from discriminating on the basis of sex regarding access to education at institutions receiving federal funding (Jessup-Anger et al., 2018; Title IX of the Education Amendments of 1972, 1972). In the years closely following the passage, the law called attention to sexual harassment in educational settings but did not provide specific guidance or actions required by higher education institutions (Jessup-Anger et al., 2018; Marine, 2019). The issue existed mainly outside the scope of the public's attention. It resurfaced in two major waves: the 1980s and 1990s, with federal exploratory studies establishing urgency to address the problem with additional federal legislation and 2011's watershed moment of the Dear Colleague Letter published by Obama-era leaders. Within the last decade, the public has recently renewed pressure on college campuses and legislators to eradicate the problem, as evidenced by incidents at Stanford, the University of Virginia, Columbia University, Vanderbilt University, and Florida State University<sup>3</sup> that garnered national media attention and public outcry (Marcotte & Palmer, 2016). Some states have responded by enacting accountability measures in higher education, directing institutions to address campus sexual assault in specific ways with punitive outcomes for noncompliance. This chapter offers context for the development of Title IX in higher education, an understanding of California and New York's policy contexts as early adopters of

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<sup>3</sup> In these instances, the details of the sexual misconduct episodes on campus were released, each spurred significant national media coverage and deeper investigation by journalists. The students involved in each case were involved in the storytelling of their experience, speaking to their audience of college student peers. This caused a spark for increased scrutiny toward higher education leadership, and legislators, to address sexual violence more swiftly and in accordance with the law.

state-level Title IX policies, and an overview of the dissertation. Foundational to uncovering the need for this research is a deeper context of campus sexual misconduct history and legislation pertaining to higher education.

### **Campus Pervasiveness**

Although the research community may debate the statistic of rates of sexual violence among college students, campus sexual assault is still commonly described as a pervasive, top issue in higher education. College-aged women are four times more likely to experience sexual assault than non-college-aged women (Cantalupo, 2009; Fedina et al., 2016), and more often than not, alcohol is used within the assault episode (Kilpatrick et al., 2007; Krebs et al., 2007, 2009; Palmer et al., 2010; Richards, 2019). Health and wellness outcomes related to sexual assault are widely researched, suggesting sexual violence leads to negative outcomes like depression, anxiety, post-traumatic stress disorder, eating disorders, greater risk of revictimization, and even negative academic performance outcomes (Black et al., 2011; Fedina et al., 2016; Jordan et al., 2014; Mengo & Black, 2015). Most survivors know their assaulters as classmates, friends, current or former dating partners (Cantalupo, 2009; Fisher et al., 2000; Rennison & Addington, 2014; Richards, 2019). Further exacerbating the issue, 90% of sexual assault incidents go unreported, underscoring how complex, elusive, and challenging it is for higher education institutions to address this enduring issue (Cantalupo, 2009; Fisher et al., 2000; Yung, 2015). The frequency of sexual violence incidents and the silence surrounding them on the college campus requires addressing the issue on a larger scale than individual institutions. Understanding the extent of the issue's pervasiveness provides more in-depth context to the United States federal government's approach to addressing the issue over the years.

## **Federal Legislation**

The United States federal government has expressed the importance of sex equity in education through various laws, regulations, and guideline documents. The Higher Education Amendments of 1972 introduced Title IX: the prohibition of discrimination on the basis of sex in any educational program wishing to receive federal funding (Jessup-Anger et al., 2018; Title IX, 1972). Title IX, in its most recent application, directly tied sexual harassment to institutions of higher education. Further, colleges and universities receiving Title III federal funding (i.e., federal student financial aid) must take reasonable action to prevent sexual violence. Additionally, if a student reports sexual harassment, the institution must take swift and appropriate action. The federal government has yet to withhold funding to higher education institutions for Title IX violations, leading to the opinion that the threat of repercussions for non-compliance is rendered ineffective (Stratford, 2014). Although Title IX's effect on institutional compliance or federal oversight varies across the states, the subsequent examples describe several critical pieces of federal legislation aimed to address campus sexual misconduct.

### ***The Jeanne Clery Act***

In the late 1980s and into the 1990s, advocacy groups lobbied federal and state governments to increase general campus safety mechanisms prompted by Jeanne Clery's death at Lehigh University (Kiss & White, 2016). Jeanne Clery was raped and murdered by a fellow student in her residence hall. As a result of her tragic death, Clery's parents spearheaded efforts to increase transparency on college campuses about timely notification of relevant crimes to the student body in hopes of proactively addressing incidents and protecting students. The Student Right to Know and Campus Security Act of 1990 requires institutions to collect and report crime statistics to the campus and U.S. Department of Education (Kiss & White, 2016). To date,

institutions are required to report 18 types of crimes, including murder, robbery, and assault; alcohol, drug, and weapons violations; sex offenses including rape, fondling, and incest; and hate crimes (Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act of 1990, [Clery] 2018). Today, this legislation is commonly known as the Clery Act.

In addition to timely notification of crimes to the campus community, institutions are required to compile these incidents into an annual report published and distributed to campus stakeholders as well as state and federal government officials (Jessup-Anger et al., 2018; Kiss & White, 2016). In 1992, the Campus Sexual Assault Victim's Bill of Rights was signed into law; this legislation outlined specific requirements for higher education institutions concerning sexual assault. Per the Act, institutions must create and publish a sexual assault policy, "which would (1) include information about prevention; (2) outline resources available in the aftermath... and (3) [detail] the specific procedures used on campus to investigate and adjudicate sexual assault." (Jessup-Anger et al., 2018, pp. 13–14). Taken together, this early effort signaled the importance of transparency and action in higher education settings yet provided minimal guidance about how to execute the mandates enacted.

### ***Violence Against Women Act***

Another critical moment to the advancement of addressing sexual violence in the United States includes the development and passage of the Violence Against Women Act of 1994 (VAWA). For the first time, this piece of federal legislation included directives about sexual violence that focused on preventative measures, funding for victim resources and services, and provided guidance about appropriate and acceptable evidence for these types of cases (The Women's Legal Defense and Education Fund, n.d.). The law also provided financial resources to higher education institutions to address sexual violence, reduce crimes, and increase support to

victims on campus (Jessup-Anger et al., 2018). The Violence Against Women Reauthorization Act of 2013 (2013) would add domestic violence, dating violence, and stalking as categories of incidents included in annual reporting requirements. This was the first expansive effort to address violence against women, provide protective measures for victims, and coordinated community response to sexual violence through prevention, education, and resources (Campus Sexual Assault Victims' Bill of Rights Act of 1991, 1991). Although this landmark legislation helped address sexual violence within United States' society, it did not provide specific guidance or directions for higher education institutions regarding the expected response, prevention, or compliance.

### ***Guidance Under Two Presidential Administrations***

Two decades after the passage of the legislation mentioned above, and under the Obama administration, sexual assault guidelines were codified through the Dear Colleague Letter (DCL), authored by the U.S. Department of Education and Office for Civil Rights (Ali, 2011). This document explicitly tied sexual violence to sexual harassment, and thus Title IX. Institutions were obligated to address the issue by providing reporting structures and resources: publishing explicit policies and procedures for investigation and adjudication; providing victim resources; and implementing proactive interventions to prevent sexual violence (Ali, 2011; Jessup-Anger et al., 2018). For example, the DCL guided the scope of an investigation, campus stakeholders who possessed the reasonable authority to report incidents, and even recommendations on the campus adjudication process and standard of evidence to be used (Ali, 2011). The DCL also explicitly appointed the role of Title IX coordinator as the authority to decisively handle these types of incidents and ensure compliance (Ali, 2011). In contrast, some

argue the DCL placed an undue burden on institutions to comply with federal law and provided unclear and confusing guidance.

Following the DCL publication, the White House launched two sizable public awareness campaigns via task force: It's On Us and Not Alone. The task force produced two reports indicating findings and progress on the initiative to end sexual violence. The first report highlighted one major problem in higher education: compliance with federal laws already in place aimed to address campus sexual violence, Title IX, and the Clery Act.

Reports show, however, that institutions' compliance with these Federal laws is uneven and, in too many cases, inadequate. Building on existing enforcement efforts, we must strengthen and address compliance issues and provide institutions with additional tools to respond to and address rape and sexual assault. (Office of the Press Secretary, 2014, para.

2)

These campaigns focused on widespread education to students and university administrators about different types of sexual violence, consent, rape myths, and prevention and intervention tools (e.g., how to file a complaint of sexual violence). The campaigns ignited the push for creating confidential reporting resources in higher education and encouraged similar laws and policies at the state level (Richards, 2019). For the first time, there was a national call to action to recognize, identify, and correct this deeply pervasive issue. This call was also focused explicitly on institutions of higher education.

Under the Trump administration, the Office of Civil Rights rescinded the 2011 Dear Colleague Letter; this action afforded higher education institutions more flexibility when addressing sexual misconduct than previously guided under the Obama administration (Jackson, 2017). The new guidance lowered the standard of proof needed for campus adjudication,

provided more flexibility in the timeframe within which institutions must begin and complete an investigation, and more lax methods of resolution – informal methods, reduction of parameters around cross-examination, and ability to appeal outcomes (DeVos, 2018; Jackson, 2017; Meckler, 2018; Starich, 2017). Ultimately, federal guidance’s most recent change does not change the institution’s obligation to prevent and respond to sexual misconduct to be Title IX compliant. The update, however, signaled a shift in lowering federal priorities in addressing campus sexual misconduct. Different reporting and response structures in higher education, and disparities in laws and policies, contribute to confusion about how campus-level administrators should interpret and enforce the law. Campus sexual violence and confusion on how to remedy it effectively remain prevalent in today’s institutions of higher education. Some states, in response, have enacted policies directing colleges and universities to comply in a specific manner and address the incidents reported, lest they lose state funding.

#### **State Legislative and Policy Context<sup>4</sup>**

California and New York are two early adopters of state-level Title IX mandates requiring higher education institutions to address campus sexual violence, adopted in 2014 and 2015, respectively. These states serve as the natural experimental treatment group when compared to the non-adopting states in the United States. As recently as 2019, 95 bills were introduced in 27 states, including Washington, D.C., that dictated institutional response around sexual misconduct; at least 16 of them passed (Sarubbi, 2019). As of this writing, 21 states have codified campus sexual assault policies (Whinnery et al., 2019). It is central to this study for the reader to gain a short policy context for California and New York as the first states to adopt and implement this legislation in large, public four-year higher education institutions.

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<sup>4</sup> A reference chart with summaries of the relevant legislation can be found in Appendix A.

## *California*

California is the most populous state in the United States, with a significant state economy and extensive education system. Four-hundred twenty institutions of higher education are located within the state; over one-quarter of those institutions belong to one of the three major university governing systems within the state (i.e., University of California, California State University, or California Community Colleges) (IPEDS, 2019a; Pechota et al., 2020a). As a \$63.2 million venture annually, postsecondary education is a large part of daily Californian life for its citizens and political leaders (IPEDS, 2019b).

At the start of 2014, several California institutions were reported to capture crime statistics only partially on their campuses, violating the Clery Act and possibly Title IX (Mason, 2014). Mike Gatto, a California state assembly member, took up the issue of campus sexual violence shortly after media reports alleged a widespread problem in institutions of higher education in the state. Gatto presented Assembly Bill 1433 in committee in February 2014 to address sexual violence on some college campuses, requiring governing boards to establish protocol, preventative measures, and reporting structures to receive state funding through the Cal Grant program (Student Safety, 2014). Cal Grant monies were awarded directly to students and could be applied to institutions within the California State University (CSU), University of California (UC), and California Community Colleges (CCC) systems (California Student Aid Commission, 2020).

This bill would, as a condition for participation in the Cal Grant Program, require any report by a victim of a Part 1 violent crime, sexual assault, or hate crime, as defined, received by a campus security authority and made by the victim for purposes of notifying the institution or law enforcement, to be immediately, or as soon as practicably possible,

disclosed to the appropriate local law enforcement agency without identifying the victim, unless the victim consents to being identified after the victim has been informed of his or her right to have his or her personally identifying information withheld. (Student Safety, 2014, para 3.)

The bill passed and was enacted into law in May 2014. Thus, if an institution were noncompliant with reporting sexual violence and addressing it per the legislation, institutions would no longer be eligible to accept Cal Grant students for the particular year(s) of noncompliance. The California state legislature instructed all applicable campuses to have policies and procedures in place by July 1, 2015. This was the first state-level Title IX policy in place in the United States; another early adopter of progressive policies, New York, shortly followed with their own legislation pushing even farther forward with what was asked of institutions to address campus sexual violence.

### ***New York***

As a densely populated state with relative wealth compared to the United States, New York mirrors California in some of its state context. New York hosts the second largest number of postsecondary institutions, 295 public and private entities, lagging behind only California (IPEDS, 2019a). The state prominently features a centralized and bureaucratic education system - managing elementary through post-secondary offerings with several offices and governing entities. The Board of Regents of the University of the State of New York is the governing authority over all educational activities, public and private, and provides oversight to the education department, including the Office of Higher Education. The State University of New York and the City University of New York are the two governing boards responsible for overseeing the four-year public institutions. With such a significant governmental presence in

higher education, it is reasonable to expect a connection between the state education offices and legislators.

While state leaders primarily drove the dialogue about sexual misconduct in California, the national conversation about campus sexual violence seemed to shape New York's policy adoption context. The White House Task Force formed in January 2014 with President Obama's directive to understand the complex issue of sexual violence and produce an early report of findings to drive initial action. Simultaneously, Senators Claire McCaskill (MO) and Kirsten Gillibrand (NY) drafted the first rendition of the Campus Accountability and Safety Act (Campus Accountability and Safety Act, 2017). It focused on amending the Clery Act to require institutions of higher education to specifically report on the campus adjudication process for sexual violence cases on an annual basis, in addition to the Clery crime categories in the well-established yearly report to local and federal authorities. This new legislation would also change the financial penalty institutions faced from forfeiting federal funds to being penalized one percent of the institution's operating budget for the year in violation of the policy (Campus Accountability and Safety Act, 2017; New, 2014). This legislation is still currently pending in the U.S. Senate.

The conversation in New York was spearheaded by the Governor, Andrew Cuomo, as a part of his agenda which emphasized New York as the "progressive capital of the nation, ...proud to take on tough issues like changing the culture and mindset surrounding sexual violence on college campuses." (Office of the Governor, 2015, para. 3). The governor launched a year-long public awareness campaign to educate students, stakeholders, and campus communities about the nation's most stringent state-level Title IX policy to date. The bill nicknamed "Enough is Enough" is a comprehensive piece of legislation requiring all institutions within the state to: (1)

adopt an affirmative consent policy; (2) adopt a statewide amnesty policy aimed at increasing student willingness to report incidents of sexual violence; (3) enact a student bill of rights; (4) provide comprehensive training to students, faculty and staff about sexual violence; and (5) report aggregate sexual violence statistics to the State Education Department on an annual basis to receive certification of compliance (An Act to Amend the Education Law, in Relation to the Implementation by Colleges and Universities of Sexual Assault, Dating Violence, Domestic Violence and Stalking Prevention and Response Policies and Procedures; and to Amend the Civil Practice Law and Rules, in Relation to Privacy of Name in Certain Legal Challenges to College/University Disciplinary Findings; and Making Appropriations Therefor, 2015; New York State Education Department, n.d.). Proposed in the state legislature in June 2015, it was passed, signed, and enacted by the governor just one month later.

Simply, this law requires all institutions of higher education, regardless of the governing system (i.e., public, private, two- or four-year), to annually certify compliance via state-coordinated reporting mechanisms by producing an annual crime statistics report. Failure to obtain the yearly certification resulted in the withholding of “state aid or assistance” (New York State Office of Campus Safety, 2017, p. 12, para. 2). Like the California state-level Title IX policy, this legislation directed institutions to address campus sexual violence in a more specific way than the federal Title IX legislation (i.e., Title IX itself, Clery Act, Violence Against Women Act). Both the California and New York policies mimic the national policy’s vague financial penalties for noncompliance. The novelty of the policies, combined with the legislation’s significant directives to higher education institutions in each state, warrant empirical study examining the policy’s effect on institution-level sexual misconduct incident reporting.

## **Need for the Study**

Although the societal and policy context in California and New York began to set the stage for this research, the development of the study of campus sexual assault also points to a need for rigorous testing of this type of higher education policy. The academic literature focuses on several themes including victimization and victim response, institutional response, and policy. The overwhelming majority of research focuses on victimization rates, demographics, the role of drugs and alcohol, victim risk factors, and victim response measures: behavioral intervention, prevention techniques, training campus constituent groups (Linder et al., 2020). Little research exists on the institutional response, including compliance, resource allocation, and administrative versus criminal investigations (Amar et al., 2014; Clay et al., 2018; Richards, 2019). Even less empirical research uncovering the effect of sexual violence policy at the institutional level exists in the body of literature (DeLong et al., 2018; DeMatteo et al., 2015; Linder et al., 2020). The attempt at identifying causal effects of sexual assault policy at the state level does not yet exist in publication. What is even more concerning is that research completed in the last decade about campus sexual violence occurs in fields outside of higher education: psychology, public health, women's studies, and law (Linder et al., 2020). For an issue based in higher education institutions and cited as a pressing issue in the industry from internal and external stakeholders, the research perspectives about sexual assault policy are missing from higher education literature. This study begins to fill that gap.

Well-researched topics on campus sexual assault often are found at the individual level focused on the victim's experience, victim risk factors, health and wellness outcomes for victims, and intervention and educational prevention techniques. Quantitative and qualitative studies have determined college-aged women are more likely to be victims of sexual violence, likely to

experience depression, anxiety, and post-traumatic stress disorders as a result of the experience, and victims are unlikely to report incidents of sexual violence for myriad reasons (Cantalupo, 2009; Jordan et al., 2014; Krebs et al., 2007; 2009; Mengo & Black, 2015; Yung, 2015).

Addressing issues like consent, rape myths, and bystander intervention techniques with college students increase their likelihood of stepping in to prevent sexual assault among peers (DeLong et al., 2018; DeMatteo et al., 2015; Marine, 2019). Examining the institutional level, academic literature uncovered a lack of clarity from the federal government in institutions' attempt to comply with Title IX legislation, a stretching of resources to address issues brought to the institution's attention, and frustration with campus response (Amar et al., 2014; Clay et al., 2018; Kiss & White, 2016). The sexual assault policy literature is narrowly focused on the historical development of sexual assault federal legislation, university policy's compatibility with state criminal law, institutional compliance with Title IX, or institution's reactive versus proactive responses to Title IX (DeLong et al., 2018; DeMatteo et al., 2015; Kiss & White, 2016; McMahon et al., 2019).

### **Purpose of the Study**

This study contributes to the academic literature by examining a new pathway of policy research. It expands the campus sexual assault policy literature by adding a new topic focused on state-level mandates previously unexplored. This study also adds to the higher education policy literature by expanding the use of two theoretical frameworks to a new higher education accountability policy examining causal effects. Ultimately, creating empirically tested policy research in higher education can allow for data-informed policy decisions at the state and national levels regarding campus sexual misconduct. Using DID regression techniques, principal-agent theory (Jensen & Meckling, 1976; Kivisto, 2005; Lane & Kivisto, 2008; Ross,

1973), and the policy adoption framework (Hearn et al., 2017; Walker, 1969), the purpose of this research is to determine the effect of state-level Title IX laws on the frequency of recorded incident reports at four-year public institutions of higher education. The primary research questions explored in this study are:

- 1) To what extent does the introduction of state-level Title IX legislation (Assembly Bill 1433) affect sexual misconduct incident reporting at four-year public institutions in California?
- 2) To what extent does the introduction of state-level Title IX legislation (Amendment 129B) affect sexual misconduct incident reporting at four-year public institutions in New York?

This inquiry line is situated within a conceptual framework that explains the state characteristics that make higher education policy adoption likely and the effect of the state legislatures on individual campus compliance with the state mandates. As is discussed in the next section, the complementarity of these two frameworks suggests that institutional compliance measured by incident reporting may have a relationship with the state's policy context and need to obey the policy to access state funding dollars. Ultimately, this study illuminates these state-level Title IX policies' efficacy and determines if this is a useful intervention tool to eradicate campus sexual violence.

### **Theoretical Framework**

Public four-year institutions are complex organizations with multiple layers of decision-makers; they balance a variety of pressing priorities at any one time and operate within a complex state policy environment. Since this study examines the effect of state policy on institutional reporting outcomes in two states, the conceptual framework must explain the state

policy context and the relationships between the decision-makers at the state and institutional levels. The policy innovation and diffusion model and principal-agent theory are used in this study to construct an appropriate theoretical framework to explain the policy context within the early-adopting states and how the relationship between state and institutional decision-makers affects sexual misconduct incident reporting (Hearn et al., 2017; Kivisto, 2005; Lane & Kivisto, 2008). The policy innovation and diffusion model provides a framework to explain the state characteristics that make it likely for legislators to formulate and adopt higher education policy (Hearn et al., 2017). Principal-agent theory provides a framework to explain how state governments and public institutions relate and contract with one another to offer higher education opportunities (Lane & Kivisto, 2008). State governments contract with public institutions to provide educational opportunities to students, as the task is too costly and inefficient for the state government to deliver. In this relationship, institutions are beholden to state governments which act as the principal (Kivisto, 2005, 2008). The principal establishes and engages in a contract with the institution, the agents. For compliance with the contract, institutions receive a reward or for non-compliance, a penalty, in this case, state funding. Combined, both frameworks consider the policy environment in which the early adoption of state-level Title IX mandates took place in California and New York and the policy effect on institutional incident reporting outcomes.

### **Research Design**

The central question to be answered in this study focuses on the effect of a state-level mandate on institutional outcomes, specifically reported incidents. Given the nature of the process of policy adoption, utilizing quasi-experimental causal statistical methods is the preferred approach since a randomized controlled experiment is not possible (Furquim et al.,

2020; Reichardt, 2019). DID regression techniques will be utilized to compare treatment groups (i.e., California and New York) to several control groups (i.e., states belonging to a regional compact, bordering states, a national comparison group of states that never adopted the state-level Title IX policy) to determine the extent of a policy effect over a series of time.

Using DID estimation strategy, this study identifies the causal effect of a state policy on institutional outcomes. The shift in institutional incident reports can be accounted for through DID because the technique examines incident reporting levels before the passage and enactment of the policy and after its implementation; this technique also includes comparison groups to more accurately detect the effect by removing bias due to events unrelated to the policy under investigation. The comparison or control groups were selected to maximize the natural experiment's benefits and address validity concerns in the statistical method. Regional compact states (i.e., members of Western Interstate Commission for Higher Education) or bordering states as a control group address unmeasurable aspects of the state context. California can be compared to its fellow WICHE compact members; New York does not belong to a regional compact, so bordering states will provide the next best comparison. The never-adopters control group is used to assess bias due to history or maturation effects in the absence of the intervention. The societal phenomenon of the #metoo movement is an example of what can be statistically accounted for by controlling for bias through utilizing control groups. This study examines the policy's average treatment effect over time and more closely looks at the policy effect year to year to uncover the policy effect from enactment to normalized implementation.

## **Data**

This study incorporates state and institutional level observations before and after the implementation of the state mandates, which occurred from 2014 to 2015. A panel data set is

constructed on select public four-year institutions in the United States to capture the policy effect on sexual misconduct incident reporting. Data describing state characteristics are provided by the U.S. Department of Education, Integrated Postsecondary Education Data System (IPEDS), a comprehensive and widely used database in quantitative higher education research. Data describing the vast array of sexual misconduct incidents by an institution is provided by the U.S. Department of Education, Office of Postsecondary Education's campus security and safety database. This study compares incident reporting rates controlling for student demographics, institutional type, governance structure, and higher education funding sources (e.g., state grant, and appropriations dollars) in states with the state-level policy to control states lacking any state-level policy. California and New York will serve as the treatment states since legislation dictating institutional response has been in effect since 2014. Several comparison groups (i.e., regional compact member states bordering states, and a national comparison group of non-adopting states) will be utilized to detect the policy effect more accurately, if one exists.

### **Variables**

This study's dependent variable is incident reports, a composite number of total incident reports for applicable institutions within the state, including incidents occurring on or off campus. Regardless of location, these reports include incidents of stalking, dating violence, domestic violence, fondling, forcible sex offenses, non-forcible sex offenses, and rape. The categories of sexual misconduct mentioned above are defined by the Clery Act and Violence Against Women Act (Clery Act, 1990; VAWA, 2013). Incident reporting years between 2010 and 2019 are captured in this study to provide a sufficiently large dataset with years before and after policy implementation (Zhang, 2010)

A series of state-level characteristics and variables are utilized as independent control variables to specify the statistical model used and accurately identify appropriate comparison groups. State-level features are driven by the policy innovation and diffusion model (Hearn et al., 2017): population size, educational attainment, postsecondary enrollment rate, postsecondary funding, and tuition levels, legislative professionalism (Squire, 1997, 2007), gubernatorial affiliation and legislative control, and postsecondary governance arrangements. Theoretical frameworks also drive the inclusion of additional state-level control variables: governance structure, student enrollment. The presence of the state-level Title IX mandate is included as a dummy variable to indicate the years the policy was in effect for treatment states and absent before enactment for treatment states and all control states. Each variable at the state level is included to more correctly specify the statistical model to accurately identify the policy's effect on sexual misconduct incident reports.

### **Statistical Method**

Causal statistics in higher education research have been applied more extensively in the past decade, moving away from correlational studies and employing methods like DID regression more frequently (Furquim et al., 2020). This method compares pre-and post-intervention outcomes of a treatment group to a control group that did not receive the treatment. DID can account for non-measurable, time-invariant, similar contexts in each group, isolating the treatment effect (Zhang, 2010). Although state-level sexual assault policies have not yet been empirically tested, this study builds upon prior research on other higher education accountability policy studies (e.g., performance-based funding) utilizing DID techniques to examine causal effects.

Accountability policy studies in higher education most readily use this technique, examining performance-based funding models' effect on various institutional outcomes (Hillman et al., 2015; Tandberg & Hillman, 2014; Tandberg et al., 2014). Briefly, in performance-based funding models, institutions must achieve institutional level outcomes (e.g., degree production, retention rates, cost per student) outlined in policy to help determine the level of financial support provided by the state. While designed to increase student completion, the previous studies examined variables in a causal manner, pushing beyond correlational relationships. Tandberg and Hillman (2014) examined the impact of performance-funding models on degree completion rates at public four-year institutions and determined the longer the policy was in effect, the more likely institutions were at increasing completion rates. Tandberg et al. (2014) continued this line of questioning in applying the DID investigative method to community colleges' performance funding policies, finding this type of accountability policy even less significant or effective at causing institutions to achieve prescribed outcomes. Hillman and colleagues also took this method one step further in their 2015 study, examining a performance-funding and incentive program aimed at improving credential completions in community colleges in the state of Washington (Hillman et al., 2015). This study described outcomes in a hierarchical order, examining lower-order outcomes (i.e., retention) through higher-order outcomes (i.e., completion of a degree). The causal model revealed lower-order outcomes were achievable in the short-term, while it took much longer to achieve higher-order outcomes under the performance-funding model. If institutions could persist under the accountability policy guidelines for long enough, they would see the results the policy purported to achieve. Taken together, utilizing causal models in higher education accountability research can help institutions

pinpoint where efforts can be directed in earlier years of implementation and assist them in staying focused on compliance and the realization of results in the longer-term.

This study builds upon previous accountability policy research by employing regression techniques to examine the policy effect on institutional incident reports of sexual misconduct, specifically, teasing out the treatment effect over time (i.e., average treatment effect, treatment effect by year). This method requires examining state-level data into pre-and post-levels of incident reporting before and after implementing the relevant state policy. DID also allows for comparing institutions within California and New York to states that never received the policy treatment, where incident reporting levels can be compared over the same pre-and post-intervention periods. DID regression can account for the unique, time-invariant state contexts of the treatment and control groups while focusing on the policy effect, if any is present. In other words, the comparison groups embedded in the technique help account for confounding bias in the statistical model. When correctly specified, the causal technique should isolate how the state-level policy's presence changed sexual misconduct incident reporting levels at four-year public institutions in California and New York.

### **Limitations**

While this study advances the sexual assault policy literature in meaningful ways, it comes with limitations. First, the availability and consistency of the dataset drive the investigation. Since the implementation of state Title IX policy is relatively new, and national tracking data of sexual misconduct incidents by the Clery Center is less than a decade old, capturing large amounts of data on this topic is difficult. The earliest year of records captured for the widest variety of sexual misconduct incidents on campuses across the United States. by the Clery Center is 2014 (U.S. Department of Education, 2019). This includes crimes classified by

the Clery Act and the Violence Against Women Act. Since the focus of institutional reporting is less than ten years old, two datasets must be merged, and missingness in the variables must be addressed. The novelty of sexual assault incident reporting does not allow for a rich, deep history of reports to help understand the pattern of reporting across states or institutions to a significant level. This study is the first attempt at causally examining these reports and should be interpreted with caution. Second, the data reported hinges on each institution's thorough understanding of what needs to be recorded and doing so accurately. Further exacerbating the issue is the extremely low reporting rates of incidents of sexual violence among college-aged students (Cantalupo, 2009; Spencer et al., 2017; Yung, 2015). Finally, this policy research is one piece of the complex puzzle to understand campus sexual misconduct. Using causal statistical techniques helps understand this particular policy lever, but quantitative analysis alone does not fully picture the larger problem. This study should be coupled with qualitative research in future iterations to create a multi-pronged approach to understand why sexual misconduct policies are or are not a useful tool to address this pervasive problem.

### **Implications of the Research**

This study presents a series of implications for theory, research, and policy. First, this study evaluates the effect of a state-level Title IX policy on state-level outcomes by testing causal relationships within a natural experiment. Policymakers can use empirical data to shape future legislation affecting higher education more precisely with researched evidence. This can aid in allocating resources and focusing on state-level policy since its implementation requires significant resources. Second, the study advances the theoretical discussions used to analyze accountability policy in higher education by examining the relationship between the state government and public institutions in a more complex and comprehensive way than principal-

agent theory alone. Third, this study advances the use of causal statistical techniques to examine a policy's effect beyond the correlational relationships more commonly studied.

## CHAPTER TWO

### LITERATURE REVIEW

Although campus sexual assault policy research is prevalent in academic literature, few studies, if any, focus on the nexus of state-level policy and institutional-level impact. The purpose of this study is to determine the effect of state-level Title IX laws on the frequency of recorded incident reports at public institutions of higher education to help determine the effect of the law addressing campus sexual misconduct. This research utilizes principal-agent theory (Jensen & Meckling, 1976; Kivisto, 2005; Lane & Kivisto, 2008; Moe, 1990) and the policy innovation and diffusion conceptual model (Hearn et al., 2017; Walker, 1969) to explain why California and New York adopted the state-level mandate earlier than other states, and how legislatures and public institutions address campus sexual misconduct. As will be discussed later, the policy innovation and diffusion framework provide insight into California and New York's state contexts, serving as the first two adopters in the United States to tie state funding to sexual misconduct response in higher education. Further, principal-agent theory demonstrates how California and New York public colleges and universities act as agents to carry out the state mandate and how the state legislature, the principal, monitors compliance progress. The conceptual framework explained in this chapter is used to help determine the efficacy of the state mandates within California and New York while building on prior research in political science, economics, and higher education.

This chapter contains three primary sections. The first section examines prior studies on campus sexual misconduct: sexual assault victim-survivors<sup>5</sup>, campus response, policy, and reporting barriers. The second section addresses higher education policy adoption by state

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<sup>5</sup> Throughout the paper, I utilize the terms victim, survivor, and victim-survivor interchangeably. Persons who experience interpersonal violence, such as sexual assault or misconduct, are not reduced to the moments of the violence, but are complex, strong, and healing beings on a lifelong journey of restoration and empowerment.

legislatures. The third section provides greater insight into the policy innovation and diffusion framework and principal-agent theory, how these frameworks guide the study, and how the frameworks help address the efficacy of state-level Title IX policies in higher education. This chapter addresses gaps in the two relevant bodies of literature while bringing together prior theoretical and empirical work to guide the intended purpose of this study.

This study focuses on determining the effect of state-level Title IX policies on incident reporting rates at public colleges and universities in California and New York, compared to states that lack this type of law. The primary research questions explored in this study are the following:

- 1) To what extent does the introduction of state-level Title IX legislation (Assembly Bill 1433) affect sexual misconduct incident reporting at four-year public institutions in California?
- 2) To what extent does the introduction of state-level Title IX legislation (Amendment 129B) affect sexual misconduct incident reporting at four-year public institutions in New York?

### **Campus Sexual Misconduct in Higher Education**

The existing literature on campus sexual misconduct is multi-disciplinary, drawing on public health, psychology, law, and education. The topics are varied, with considerable focus on victimization rates, victim risk factors, intervention and education strategies, and response to sexual violence (Linder et al., 2020). Many studies utilize convenience samples of human subjects that do not accurately represent the current college-going demographic: disproportionately White, heterosexual, cisgender, traditionally aged college women as the victim-reporters of sexual assault (Fedina et al., 2016; Linder et al., 2020; Marine, 2019). The

research focused on sexual assault policy is understudied and under-published in the field of higher education, producing a gap in knowledge about the effect of policy addressing this enduring issue. When campus sexual assault policies and their effects are studied, often the research is atheoretical or neglects to examine a causal relationship (DeLong et al., 2018; DeMatteo et al., 2015; Marcotte & Palmer, 2016; Richards, 2019). Due to its novelty, examining state-level Title IX policies is missing entirely from the academic literature. Further, the narratives about sexual assault policy showcase the institutional perspective (i.e., institutional compliance; (Amar et al., 2014; DeLong et al., 2018; DeMatteo et al., 2015; Marcotte & Palmer, 2016) or individual perspective (Fedina et al., 2016; Halstead et al., 2017; Krebs et al., 2009; Muehlenhard et al., 2017; Spencer et al., 2017; Yung, 2015). This study aims to address these gaps in sexual misconduct research. Understanding the fuller body of extant research on campus sexual assault in higher education helps the reader gain brief awareness of the evolution of federal legislation addressing campus sexual assault.

### **Federal Legislation Sets the Stage for Higher Education**

Title IX, cemented into federal law as a part of the Education Amendments of 1972, is famously known for bringing sex equality to collegiate sports. Yet, its current application pertains to addressing sexual misconduct on college campuses. Two decades after its passage, the Jeanne Clery Act in 1990 required colleges and universities to publish and alert community members of crime statistics and incidents occurring on and near the campus (Clery Act, 1990). Further, the Campus Sexual Assault Victim Bill of Rights mandated campuses to specifically collect and respond to incidents of campus sexual assault in addition to the Clery Act crime categories (Campus Sexual Assault Victims' Bill of Rights Act of 1991, 1991). It also mandated campuses to create and publish widely its policies, procedures, and victim bill of rights related to

this type of violence. The Violence Against Women's Act followed in 1994, providing unprecedented attention and protection to women regarding issues of sexual violence, codified in law the need to respond effectively to rape and battering with prevention efforts and the funding to make it possible (The Women's Legal Defense and Education Fund, n.d.; *Violence Against Women Act of 2013*, 2013). This collection of legislation signaled significant federal interest in more rigorously exploring and addressing sexual misconduct on college campuses.

In turn, this spurred exploratory studies by academic researchers and federal agencies (Fisher et al., 2000; Karjane et al., 2005; Kiss & White, 2016) at the turn of this century. Fisher's research team established urgency to study campus sexual misconduct by uncovering alarming rape and attempted rape rates among the women college student population. Fisher and colleagues (2000) found that one in five women experienced sexual violence in their collegiate years. This report challenged Perkins and Klaus' (1996) National Crime Victimization Study, which included sexual crimes as one type of violation in its overall report, instead of disaggregating the myriad sexual violence experienced by college women (Fisher et al., 2000). Karjane's (2005) research team subsequently published a study with the support of the National Institute of Justice and asserted unevenness in institutional compliance with federal policy and providing resources to students necessitates federal guidance in how to address sexual assault adequately. As will be discussed later, this study also documented the barriers victims face when reporting incidents of sexual misconduct and provided a call to action to higher education institutions to acknowledge, respond, and address the behaviors identified in the research report. Although fundamental in beginning research in this area by utilizing national samples of human subjects, these studies did not use theoretical frameworks relevant to the topic area, causal or correlational statistical methods to analyze the problem. This study aims to rectify some

shortcomings of the previous research by expanding the scope of analysis and application while grounded in theory to examine college campus sexual misconduct more rigorously.

The 2011 Dear Colleague Letter published by the U.S. Department of Education under President Barack Obama's administration served as another seismic catalyst into campus sexual assault research. This letter plainly connected sexual misconduct to sexual harassment in an educational setting, requiring institutions receiving federal funding to comply with Title IX mandate (Ali, 2011; Jessup-Anger et al., 2018). For the first time, this guidance provided national expectations to higher education institutions receiving federal funding in how they should be documenting, responding to, preventing, and adjudicating incidents of sexual assault. Future state-level policies (e.g., California Assembly Bill 1433<sup>6</sup>, New York Article 129-B<sup>7</sup>) would be modeled after the special connection between institutional campus sexual assault response and state funding.

Despite sexual misconduct and sexual harassment being ever-present on college campuses generations prior to the increased effort of each respective study, these foundational studies spurred what is now known as the research body of literature about sexual misconduct in higher education (Jessup-Anger et al., 2018). The last 20 years of research has focused chiefly on victimization and victim-related studies, how campuses respond to sexual misconduct, institutional policies addressing sexual misconduct, and more specifically, barriers to incident

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<sup>6</sup> California Assembly Bill 1433 requires institutions in the University of California, California State University, and California Community College systems with 1,000+ full-time equivalent (FTE) enrollment to publish and distribute a sexual misconduct policy outlining institutional response, and coordination with local law enforcement. Incidents must also be reported to the Board of Regents. Failure to create, publish, distribute, and comply with the sexual misconduct policy may result in forfeiture of state funding.

<sup>7</sup> New York Article 129-B is part of a larger legislative package addressing sexual assault in education applied to all institutions of higher education within the state, regardless of governing control or public/private designation. This article focuses on the campus adjudication of sexual misconduct and its reporting, requires institutions to annually certify their compliance with the New York State Education Department, and mandates institutions to define and adopt the definitions of sexual assault, a student bill of rights, and uphold the statewide amnesty policy. Failure to comply results in forfeiture of state funding and aid.

reporting on college campuses (Fedina et al., 2016; Linder et al., 2020; McMahon et al., 2019). As of this writing, 259 postsecondary institutions are under investigation by the federal Office of Civil Rights to determine if sexual harassment and sexual violence violations under Title IX were committed (Office of Civil Rights, 2020). If found responsible for violations, those institutions may face significant financial penalties, including withholding federal funds. As a result, colleges and universities have a vested interest in understanding how the federal, but more importantly, state-level Title IX policies affect their campuses. The potential for a significant loss in funding suggests Title IX policy-focused research at the state and institutional level should be more prevalent in the literature. This study aims to tighten that gap.

### **Examining Campus Sexual Assault in Higher Education**

As previously mentioned, the campus sexual assault literature in higher education has focused on victim-related studies (i.e., risk factors, use of drugs and alcohol in sexual violence, victim impact, rates of victimization, disclosure of sexual assault), campus response studies (i.e., how institutions respond to sexual assault once made aware, staff/faculty perceptions of sexual assault, campus resources available to students who are victims of sexual assault), and prevention or intervention techniques (i.e., bystander intervention, training for students, faculty, and staff). Two underdeveloped areas of the literature most pertinent to this study are research focused on sexual assault policy (i.e., compatibility of state law and campus policy, legislative changes to include guidance about sexual assault), and barriers to incident reporting (i.e., what prevents a victim from reporting violence to their institution of higher education).

#### ***Victim-Related Studies***

One of the most prevalent topics in campus sexual assault empirical research focuses on victim-related studies. These studies generally examine issues such as factors that put victims at

risk of experiencing sexual assault, the role of drugs and alcohol in the sexual assault experience, the impact of the sexual violence on the victim (i.e., psychological distress, withdrawal from relationships, negative impact on degree completion), bystander intervention strategies and programs used to prevent sexual misconduct. When examining the larger body of academic literature, Linder and colleagues (2020) postulated that these topics make up 64.2% of the empirical research produced and published in top academic journals in the last decade in the United States. One of the foundational studies published at the turn of the century utilized a national sample of women, phone-surveying approximately 4,500 college women about their sexual experiences to gauge the prevalence rate of sexual misconduct among the population (Fisher et al., 2000). Although it helped establish urgency for this topic to be rigorously researched and addressed, especially by the federal government, this study is atheoretical and descriptive rather than uncovering any causal relationships.

Fisher and colleagues' (2000) study opened the door for more research uncovering the negative impact sexual assault experiences likely have on victims. The significant themes found in subsequent research describe the emotional and psychological distress that results after an incident (Kilpatrick et al., 2007; Krebs et al., 2007; 2009), the withdrawal from relationships leading to self-isolation (Halstead et al., 2017), and the negative impact on academic performance and dropout rates (Jordan et al., 2014; Mengo & Black, 2015) to name a relevant few. Additionally, the role of drugs and alcohol in sexual violence is a widely studied and relatively settled area of academic research. Incident reporting, combined with asking victims of assault, reveals the common use of alcohol or drugs during a sexual assault encounter (Krebs et al., 2009). Qualitative studies on this topic illuminate the motivations for drug and alcohol usage (e.g., lowering inhibitions), while quantitative studies focus on how common this tool is utilized

in sexual assault incidents (Krebs et al., 2007; 2009). Bystander intervention studies use qualitative methods to measure student learning about sexual assault prevention and debate the merits of providing such training in mixed-gender or gender-specific techniques (Barone et al., 2007; Gidycz et al., 2008, 2011, 2015). This area of literature also calls for the increased need to educate potential perpetrators about sexual assault prevention, as this is an understudied area of campus sexual assault bystander intervention research. Said differently, there is missing research regarding those who perpetrate sexual violence and assault in the college environment.

### *Campus Response Studies*

Another prevalent strain of research on campus sexual misconduct focuses on how higher education institutions respond to reported incidents. Studies range from examining institutional level policy perceptions (Amar et al., 2014; Bergman et al., 2002; DeLong et al., 2018; Halstead et al., 2017) to compliance to existing Title IX regulations (Karjane et al., 2005; Richards, 2019). Rarely do these topics intersect. Amar and colleagues (2014) uncovered varying levels of awareness and knowledge of university policy addressing sexual misconduct and the resources available to the university community. This prompted institutions to utilize more precise language in policy and response protocols: publishing a written policy on websites or in codes of conduct; posting easily accessible contact information to report an incident to a university staff member or off-campus agency; even providing targeted training to staff likely to interact with students who may disclose sexual violence.

An early study on campus compliance with the federal Title IX mandate revealed schools' unevenness in compliance with the law and unevenness in providing student resources (Karjane et al., 2005). Some institutions provided clear, easily accessible policies and possessed organizational structures to increase awareness of resources and help; these tended to be large,

public, four-year institutions. Other institutions may have lacked policy or resources available or possessed those tools in inconsistent or low levels. Like the other early and foundational studies, Karjane's early research was exploratory and lacked a theoretical basis to guide the analysis. Despite the limitations, the study established a strong call to action for the federal government to provide guidance about how to address campus sexual misconduct adequately. Surprisingly, Richards' study is the only research that directly follows up on the foundational climate survey authored by Karjane and colleagues at the beginning of the 21st century (Richards, 2019). It again uncovered how different types of higher education institutions addressed sexual misconduct through policy (i.e., sexual assault policy within student code of conduct) and action (i.e., the reporting or adjudication processes). The largest lesson from this research remains: while institutions vary in addressing it, more institutions have structures in place to address sexual assault more consistently and evenly than twenty years ago.

Complicating campus response even further, institutions of higher education do not operate under an industry-standard of the meaning of critical terms that would guide the research: sexual assault, sexual violence, sexual battery, sexual coercion, or sexual contact (Jessup-Anger et al., 2018; Wilgus & Lowery, 2018; Yung, 2015). Not only does this make the study of campus sexual misconduct and institutional response difficult, but it allows for inconsistency and unequal comparison from institution to institution. The diction and terms institutions choose to utilize and build accountability systems (e.g., the campus adjudication process) are critical in helping students understand when sexual misconduct occurs, how to report it, the consequences of the violence, and the resources for healing. The clarity in words used to describe campus sexual assault can aid in institutional compliance and student incident

reporting; a more precise grasp on defining the problem allows for more targeted and appropriate solutions.

Incident reporting can be viewed as a positive measure of the institution providing critical systems and support for victims to report, ironically, a signal of an unsafe environment or institutional response ineffectiveness. Institutions are not incentivized to publish widely and obviously the frequency of sexual misconduct, as a dangerous environment can impact campus climate, enrollment numbers, or even the financial bottom line (Marcotte & Palmer, 2016; Silbaugh, 2015; Yung, 2015). Further, if institutions are not incentivized to create and widely share a sexual misconduct policy, it follows that there would be little incentive to develop or publish a response protocol. Institutions claim they are unaware of the incidents unless victims report through the formal mechanisms and cannot respond unless the institution is plainly made aware. This can lead campuses to be perceived as ill-equipped at responding to incidents of sexual misconduct by stakeholders like students and parents.

### ***Studies Focused on Barriers to Reporting***

The early landmark studies about campus sexual assault described barriers to reporting and the incredibly low likelihood of victims-survivors reporting their violent experience to university administrators or law enforcement (Fisher et al., 2000; Karjane et al., 2005). Studies uncovered rates as high as 90% of rape incidents go unreported (Cantalupo, 2009; Cantor et al., 2015; Fisher et al., 2000; Palmer et al., 2010). Victim-survivors may not wish to disclose incidents for myriad reasons including believability, fear in how others may respond, personal understanding of the severity of the incident, or lack of faith or disinterest in the accountability process, the victim-survivor not believing the incident was severe enough to report, lack of proof the incident occurred, or not wanting to disclose the incident to family or friends (Bergman et al.,

2002; Cantor et al., 2015; Halstead et al., 2017; Spencer et al., 2017). The unwillingness or lack of desire to report sexual misconduct is unique to the survivor of each incident.

Building on previous research examining low reporting rates overall, Orchowski and colleagues (2009) uncovered the variation to whom survivors choose to disclose and the factors making them more likely to disclose. Survivors were most likely to report an assault to a friend or peer, not a campus or legal authority; women without a history of sexual victimization were more likely to report than those who had such a history (Orchowski et al., 2009). Although this study's finding should be applied with caution (i.e., the study included a homogenous, small group of participants from one university), this research sheds light on the need to understand survivors' hesitancy to report, thus accessing resources for healing. Shame, a sense of managing the incident themselves, and not recognizing the assault to be "serious enough" emerged as barriers to reporting in further studies (Zinzow & Thompson, 2011). Increasing acknowledgment of the incident as serious and harmful, providing resources to the campus community on positive disclosure behaviors (e.g., how to support a victim-survivor in the disclosure process), and interventions aimed at decreasing victim-survivor self-blame were interventions identified at reducing barriers to reporting sexual misconduct (Zinzow & Thompson, 2011).

The previous research studies highlight that reporting incidents of sexual misconduct is difficult, leading to low reporting rates. Reporting an incident through the institution's formal process is how the institution can begin its response to the parties involved, signaling compliance with Title IX. Sexual misconduct incident reporting is central to this study. Incident reports are the only concrete, published, quantifiable measure of sexual misconduct on the institutional level. Further, incident reports are evidence of the existing problem. The quantity of reports is monitored on the state and federal levels. Data from the Clery Center and the U.S. Department of

Education is used in this study to capture the dependent variable: incident reports by year per institution.

### *Policy Studies*

Although research focusing on institutional response to campus misconduct has developed moderately over the past decade, research focused on state policies addressing sexual misconduct is limited. A 50-state statutory review of sexual violence criminal law revealed that all states possess at least one law addressing sexual assault (DeMatteo et al., 2015). However, definitions of consent or incapacitation were ill-defined, making the laws difficult to apply to campus sexual assault adjudication (DeMatteo et al., 2015). As previously mentioned, campus sexual misconduct policies depend on the shared understanding and clarity of definitions and rely upon them for appropriate accountability and action. DeMatteo and colleagues (2015) reviewed 432 state-level sexual assault statutes, found inconsistency with consent language, and described a victim's available legal recourse. The existence of state criminal laws about sexual assault is beneficial to victim-survivors; their compatibility with campus adjudication procedures is low. The legal approach focuses on individual rights: examining the person-to-person misconduct, alleged perpetrator, and victim receiving due process in the form of investigation, cross-examination, and sometimes trial (Cantalupo, 2009; DeMatteo et al., 2015; Silbaugh, 2015). This approach does not examine the individuals within the college campus or the effect of the sexual misconduct on others necessary to understand this phenomenon within higher education. The administrative approach to accountability relies on institutional policy and procedure. A college or university utilizes an administrative hearing to determine if a violation of the code of conduct, sexual misconduct policy, or community standard occurred (Wilgus & Lowery, 2018). The administrative strategy does not determine if a crime between campus

members occurred. Due to the conflicting approaches, DeMatteo and colleagues (2015) recommended a blended policy strategy: a policy that combines the power and authority of state law specifically within a higher education environment, such as California Assembly Bill 1433 (Student Safety, 2014). The extant literature on campus sexual misconduct research highlights the problem's complexity: this policy effect is not widely or rigorously studied. Higher education research is missing causal analysis of state-level sexual misconduct policies on institutional level outcomes.

### **Policy Adoption in Higher Education**

To understand the effect of state-level Title IX legislation in four-year public institutions more fully, a discussion of higher education policy research is required. Much of what is now higher education policy literature stemmed from political science scholars, examining how states adopt policy or policy innovation (Berry & Berry, 1990; Walker, 1969). More recently, several higher education scholars established urgency for policymakers to analyze the effect of policies using empirical data to inform future iterations and general policy-making decisions (Hillman et al., 2015; McLendon, 2003a, 2003b; McLendon et al., 2005). To illustrate this concept, research focused on accountability policies (i.e., performance-based funding models) has grown over the last two decades, but the studies examined the effects after most programs concluded (Doyle et al., 2010; McLendon, 2003a; Tandberg et al., 2014; Tandberg & Hillman, 2014); this underscores the dire need for sweeping policies affecting higher education to be studied empirically as a part of the policymaking process.

### **Governance in Higher Education as Context for Policy Adoption**

Despite the slow growth of higher education policy research, little is known about why or how state governments take policy action related to higher education the way they do, mostly

focusing on the campus-to-state relationship (McLendon, 2003a). Attempting to understand the balance between institutional autonomy and accountability to the state, early studies examined the relationship between the state legislature creating policy affecting postsecondary education and the governing structures within them (i.e., governing, planning, or coordinating boards). Researchers uncovered the correlational relationship between governing structure and likelihood to adopt higher education policy; the more centralized governing power held by the board, the more innovative the state (Hearn et al., 1996; Hearn & Griswold, 1994). This correlation seems reasonable, given that states with more centralized higher education governing structures also tended to have staff with the ability to dedicate energy to policy advocacy, creation, and adoption (Hearn et al., 2017; McLendon, 2003a). Policy topics explored were tuition-setting mechanisms, financial aid, academic policies, and teacher certifications; the extent to which governing structure “matters” varies upon the policy under examination (Hearn et al., 2017). The early studies focused on the likelihood of adoption, not necessarily the cause of adoption, utilizing quantitative techniques with cross-sectional datasets. Examining policy context for a snapshot or period of time, as does cross-sectional data, using panel data to uncover patterns over time would be more illuminating of policy adoption patterns related to governing structure. The earlier literature also lacked a significant and consistent theoretical basis to analyze higher education policy adoption by state governments. This call to advance the research literature has been partially addressed, with the emergence of three main theoretical frameworks. These are subsequently discussed.

### **Why States Adopt Higher Education Policies**

American higher education is sometimes viewed, by academics and consumers alike, as a public good produced by the states. This notion creates a tense balancing act of holding

institutions accountable to the state government and the taxpayers that help fund them while maintaining autonomy to produce an educated citizenry. Research on higher education policy has been an ongoing examination of what constitutes the “right” mix of state regulation and institutional autonomy (e.g., Dougherty et al., 2013; Shin, 2010). Several frameworks have been discussed in the literature to help explain more systematically why states may adopt higher education policies, including Kingdon’s (1984) multiple-streams framework, Baumgartner and Jones’ (1993) punctuated equilibrium framework, and policy innovation and diffusion theories developed from political science (Berry & Berry, 1990; Moe, 1990; Walker, 1969) and adapted to higher education policymaking (Hearn et al., 2017). Policy adoption and diffusion frameworks have been most heavily cited in policy studies in the last decade.

The multiple-streams framework, also known as the “garbage can” model, describes the policy process of higher education governance reform, which consists of decision-makers using “satisficing” techniques and interest groups applying pressure to decision-makers (Kingdon, 1984). Kingdon (1984) argued that higher education policy change occurs at the nexus of decision-makers using just enough information to produce forward motion and interest groups applying enough pressure on a specific policy issue to induce the legislative change. This model implies that policy change is less strategic than circumstantial or happenstance, addressing pressing issues of higher education at the time of need. This model captures some of the organized chaos in federal policy-making arenas and is mainly applied to national policy studies (McLendon, 2003a). Although not yet widely cited, this model can provide a more in-depth understanding of the state-level policy-making processes. Due to its fundamental assertion that change occurs haphazardly, the multiple-streams framework seems to be deficient in explaining more sustained higher education policy trends, like performance-based funding policies

popularized in the 1990s and 2000s, a significantly researched topic in higher education policy. In terms of this study, although important to the development of higher education policy research, the multiple-streams framework cannot capture the sustained complexity of sexual misconduct policy in higher education, both at the federal and state levels over the last several decades.

The punctuated equilibrium framework describes a method of analysis that looks at policy making in two primary phases: an extended period of no change or progress on an issue, then with brief, intense periods of significant change on an issue that garners much attention. Baumgartner and Jones (1993) also noted that specific policy issues are continuously being worked on and developed by smaller, specialty teams behind the scenes until the issue gains traction on a larger scale, either accomplishing state or national attention, which helps result in legislative change. With many issue-specialist teams jockeying for legislative attention, these teams find and utilize various policy venues to bring attention and garner support for their issue. This ongoing contention for support and awareness leads to legislative change and defines the punctuated equilibrium framework. This analytical frame emphasizes political institutions for decision-making with a bounded rationality approach, accounting for the multiple actors in legislative change and the dynamic decision-making process of higher education (McLendon, 2003a).

Policy innovation and diffusion theories attempt to capture the complexity of higher education policymaking at the state level. Policy innovation frameworks examine internal determinants of state or intrastate dynamics to help understand the social, political, socioeconomic characteristics of the policy-making context: For example, larger and wealthier states were more likely to adopt new higher education policies (McLendon, 2003a); states with

higher governmental capacity or higher levels of legislative professionalism were more likely to adopt new higher education policies (McLendon, 2003a; Squire, 1997; Walker, 1969). Another crucial concept of policy innovation framework examines the external determinants, or interstate dynamics, of why a state chooses to adopt higher education policy. For example, a nearby state may implement a policy, and the neighboring states may create and implement a policy similar to the originator's to stay competitive. Separately, policy diffusion describes how policy is adopted by other states and spreads across academic compacts, geographic regions, or nationally (McLendon et al., 2005; Walker, 1969). The three concepts combine into one framework for researchers to understand and predict policy adoption and spreading behavior. Policy innovation and diffusion frameworks are most heavily used in accountability policy research (e.g., performance-based funding policy research analyzing its effects on higher education outcomes like degree production). This study aims to extend this line of research by applying the policy innovation and diffusion framework in a new area of accountability policy research, sexual misconduct incident reporting, which will be illuminated in the subsequent chapters.

### **Accountability Policies in Higher Education**

Accountability policies in higher education developed in two distinct waves but with the same purpose each time: attempting to hold institutions accountable to the tax-paying public, state legislature, and students for the quality of the product they were producing. Performance-based funding models are most studied in the higher education policy literature, but other forms of accountability policy are explored: tuition structures and rates, financial aid, and promise programs (Delaney & Hemenway, 2020; Doyle et al., 2010, Heller et al., 2002). While the extant literature examines the presence of performance-based funding policies in the United States,

there is no definitive evidence that these policies produce the educational outcomes or productivity measures they aim to accomplish (Hillman et al., 2015; Tandberg & Hillman, 2014). State legislatures are adopting or discontinuing participation in these programs without fully understanding their impact or effect on the target outcomes (e.g., discontinuing a performance-based funding model before policies' maturation period to see the impact on institutional outcomes like degree production).

Tandberg and Hillman's (2014) study represents a summary of the body of knowledge on performance-based funding. Using a quasi-experimental design, causal statistics, and principal-agent theory, the research team examined the effect of state-level performance-based funding legislation on 21 states during the period(s) the policy was active. The study's principal aim was to see if the bill had a causal effect on degree completion at institutions in these 21 states. The most significant finding from the study indicated that states did not maintain the policy long enough to see meaningful impacts on degree production (i.e., seven or more years), leading to many examples of this policy implementation without empirical data to support its value. The authors urge policymakers, with an abundance of caution, to pause before creating or implementing performance-based funding models to hold institutions of higher education accountable for producing more or timely degrees. The authors intended to provide a "moment of pause" to state policymakers before requiring many institutions to expand human, financial, and capital resources for a policy lever that will not guarantee the intended outcome.

Tandberg and Hillman's (2014) study clarifies the broader literature to effectively apply accountability policies in higher education for several reasons. First, quasi-experimental designs are the predominant method used; it is difficult to randomly assign states or institutions specific policies by which to abide to create a randomized controlled trial, the goal for causal research

(Furquim et al., 2020). Difference-in-differences regression techniques are commonly utilized in higher education policy research to examine the causal effect of a policy on a specified outcome, as this technique allows the researcher to control for an array of variables to more accurately isolate the effect (Delaney & Hemenway, 2020; Doyle et al., 2010; Hillman et al., 2015; McLendon & Hearn, 2013; Tandberg & Hillman, 2014; Tandberg & Ness, 2011; Tandberg et al., 2014). Analysis of higher education policy commonly occurs through the lens of principal-agent theory, examining the role of the states (principal) in creating the policy and institutions (agents) implementing or administering the policy (Furquim et al., 2020; Kivisto, 2005; Lane & Kivisto, 2008; McLendon, 2003a, 2003b).

Ultimately, this study aims to address the gaps mentioned above in the sexual misconduct and higher education policy literature in several ways. This research aims to broaden the sexual misconduct policy literature that is mostly missing from the campus sexual assault body of knowledge, expanding an understanding of the issue beyond the individual-student or institutional levels previously studied. Research on state-level Title IX policy effects will further the understanding of this policy lever within the states it is currently active, but also provide insight into the larger trend developing across the United States.

### **State Context: California and New York**

Discussion of the treatment states' context related to its demography, economics, and higher education landscape is provided to understand California and New York's policy environment more fully. Almost all data is from 2019, the most recently published statistics released by the U.S. Census Bureau, the Federal Reserve Bank of St. Louis, and the National Center for Education Statistics.

## **California**

California is the first treatment state in this study. California is the most populous state in the United States, with approximately 39.5 million people (U.S. Census Bureau, 2019a). The two largest racial groups within the state are people who identify as Hispanic or Latinx (39.4%) or White only (36.5%); peoples of Asian (15.5%) and Black (6.5%) races are the next largest racial groups within the state (U.S. Census Bureau, 2019a). The state is generally evenly distributed in terms of sex, with 50.3% female individuals (U.S. Census Bureau, 2019a). The median age of an individual in California is 37 years (U.S. Census Bureau, 2019a). Slightly lower than the high school attainment levels of the U.S. (88.6%), 83.3% of Californians achieved a high school diploma or equivalent; 33.9% completed a bachelor's degree (U.S. Census Bureau, 2019a).

California's economy is the largest within the United States and rivals GDPs of entire nations; California's GDP in 2019 was 3.14 trillion dollars (in 2019 dollars) (U.S. Bureau of Economic Analysis, 2019a). The median household income is \$75,235, with a per capita income of \$66,619 in 2019 dollars (U.S. Bureau of Economic Analysis & Federal Reserve Bank of St. Louis, 2019a; U.S. Census Bureau, 2019a). Despite California's 4% unemployment rate and 11.8% poverty rate, it is one of the wealthiest states in the country (U.S. Bureau of Labor Statistics, 2019a; U.S. Census Bureau, 2019a).

In addition to a significant population and robust state economy, California leads in the higher education sector with the largest number of institutions and student enrollment in the country. Postsecondary education revenue for 2018 totaled \$63.2 million, with \$11.5 million in state appropriations (IPEDS, 2019b). In the fall semester of 2018, 2.7 million students were enrolled in colleges and universities within the state (IPEDS, 2020b). Although state sex demographics are split relatively evenly, women are enrolled at higher rates in California

(IPEDS 2020a). They were dispersed among 420 higher education institutions, including public and private, two- and four-year colleges; 49 are four-year public institutions (IPEDS, 2019a). California does not have one statewide coordinating board or governing agency for all of higher education but possesses three major systemwide governing boards: the Regents of the University of California, the California State University Board of Trustees, and the Board of Governors of the California Community Colleges (Pechota et al., 2020a). For this study, the UC and CSU systems' primary responsibilities include awarding degrees and credentials, administering academic policies, engaging in statewide or systemwide planning efforts, and governing institutions. California's legislative decision to implement state-level Title IX legislation may have a significant impact on the large level of state funding provided on an annual basis and applies to the many campuses within the state.

## **New York**

New York serves as the second treatment state in this study. It is the fourth most populous state in the United States, with approximately 19.4 million people, almost half the California population (U.S. Census Bureau, 2019b). Similar to California, the two largest racial groups within the state are people who identify as Hispanic or Latinx (19.3%) or White only (55.3%); peoples of Black (17.6%) and Asian (6.9%) races are the next largest racial groups within New York (U.S. Census Bureau, 2019b). The state has a slightly larger female population, with 51.4% female individuals (U.S. Census Bureau, 2019b). The median age of an individual in New York is 39.2 years, slightly older than the national median. (U.S. Census Bureau, n.d.). New York's educational attainment level is about on par with that of the general population within the U.S., 87.6%, and 88.6% hold a high school diploma, respectively (U.S. Census Bureau, n.d.); 36.6% achieved a bachelor's degree (U.S. Census Bureau, 2019b).

New York's economy is the third largest within the U.S., behind only California and Texas (Statista, 2020); the GDP for New York in 2019 was \$1.77 trillion (in 2019 dollars) (U.S. Bureau of Economic Analysis, 2019b). The median household income is \$68,486, with a per capita income of \$71,717 in 2019 dollars (U.S. Bureau of Economic Analysis & Federal Reserve Bank of St. Louis, 2019b; U.S. Census Bureau, 2019b). New York also possesses a 4% unemployment rate, like California, but has increased poverty rates (13%) (U.S. Bureau of Labor Statistics, 2019b; U.S. Census Bureau, 2019b).

Similar to California, New York is significantly invested in higher education. Postsecondary education revenue for 2018 totaled \$18.3 million, with \$5.1 million in state appropriations (IPEDS, 2019b). In the fall semester of 2018, 1.25 million students were enrolled in colleges and universities within the state (IPEDS, 2020b). They were disbursed among 295 higher education institutions, including public and private, two- and four-year colleges; 43 are four-year public institutions (IPEDS, 2019a). The University of the State of New York supervises all educational efforts within the state, from elementary to postsecondary education, private and public (Pechota et al., 2020b). The USNY Board of Regents sets policy for all educational activities within the state and oversees the state's Office of Higher Education. New York also possesses two major systemwide governing boards: the Board of Trustees of State University of New York and the City University of New York Board of Trustees (Pechota et al., 2020b). The SUNY and CUNY systems' primary responsibilities include awarding degrees and credentials, administering academic policies, engaging in statewide or systemwide planning efforts, providing policy recommendations, and governing institutions within the system.

This study aims to examine two states with significant populations, economies, and investments in higher education, with prominent cultures of enrolling in colleges and

universities. Understanding the state context helps analyze the policy innovation process, thus the effect of state-level Title IX policies in California and New York on incident reporting levels in those states. Simply identifying the policy effect is a useful tool but understanding the effect within the environment in which it operates allows for research to inform future policy. Examining the policy adoption of state-level Title IX legislation within two large states may provide insight to later adopters of similarly sized states.

### **Theoretical Frameworks Guiding This Study**

In the subsequent section, I briefly discuss complementary theoretical frameworks in this study. The analyses of specific higher education policies are often coupled with principal-agent theory to describe the relationship between the policymaker (i.e., state legislature) and the agents executing the policy (e.g., institutions of higher education, governing boards). Policy innovation frameworks help systematically examine policy contexts that prime higher education policy adoption. Combined, principal-agent theory and policy innovation frameworks help explain the adoption and compliance of public, four-year institutions to state-level Title IX policies in California and New York specifically. This study builds upon previous higher education policies by again applying established frameworks to examine a new policy issue, in this case, sexual assault policy.

#### **Principal-Agent Theory**

A well-known, simple, and commonly used model in economics, political science, and increasingly in higher education, principal-agent theory (PAT) describes the relationship between a principal contracting with an agent to complete a task or effort that would be too costly or inefficient for the principal to take on itself (Lane & Kivisto, 2008; Ross, 1973). The underlying tenets of the theory describe a single principal to single agent relationship, the agent

maximizing its interest in the completion of the task, information asymmetry from the agent to the principal, and the principal providing enough incentive, compensation, or threat to the agent to prevent or minimize “shirking” throughout the completion of the contract (Jensen & Meckling, 1976). This theory developed primarily in two primary fields, political science and economics, with subtleties in applying the theory to research studies. The economic perspective focuses on explicit, often written, contracts between the principal and agent, which tends to measure the principal-defined contract’s success in private goods, or output-based metrics where the agent acts in a self-interested way (Walker, 1969). The political science perspective is a bit more complicated. The contract and measurement of contractual success are more mutually designed and measured, focusing on public good outcomes that are more difficult to measure, often through proxy variables (Moe, 1990). Often in the political science application of PAT, the relationship between the two is not usually severed if the relationship is unsatisfactory (e.g., the state legislature will not close a public university if it does not meet graduation metrics).

In higher education, PAT has been applied most notably to veins of research focused on governance, funding, state policy adoption, and diffusion (Lane & Kivisto, 2008). It is important to note that higher education scholars effectively applied PAT in the economic and political science perspectives, as neither view can accurately and wholly explain an institution’s behavior or decision-making process. Governance and policy adoption questions tend to employ the political science perspective, while funding and finance issues utilize the economic lens. The simplicity of PAT lends itself to researchers flexibly applying the approach to an array of problems in the field, yet does not contain enough complexity to capture the unique nature of higher education: a quasi-public, quasi-private enterprise with complex ties to state legislatures and the federal government (Lane & Kivisto, 2008). The principal-agent theory relies on the

single-principal to a single-agent relationship, which may not always be accurate, given how universities operate. Although there can be a singular university, there is not one actor within the university that accomplishes the principal's task. The principal, the governor and state legislature, may also contain multiple actors complicating the relationship between the entities. Multiple actors complicate the understanding of information asymmetries and shirking behavior within the relationship. PAT's starkest limitation in higher education studies is the lack of acknowledgment that the principal-agent relationship is not usually severed or ignored if either party is unsatisfied. Traditionally, if the principal finds the agent's progress or behavior unacceptable, the principal can terminate the relationship through various ways, most commonly revocation of payment. In the case of higher education, if a governor or state legislature was not pleased with the progress of a public institution, it could withhold specific funding to that institution. Still, it does not mean the institution would cease to exist or stop carrying out its duties assigned by the governor or state legislature (i.e., granting degrees).

Limited research exists on this unique application of PAT to higher education in the United States; even less studied is applying principal-agent theory to campus sexual misconduct policy in higher education. In this study, the principal-agent theory will examine the relationship between state-level campus misconduct policy and institutional incident reports. The California and New York state legislatures and governors, the principal actors, implemented a state-level Title IX policy mandating a particular response to campus sexual misconduct. The public, four-year institutions within those states, acting as the agents, must balance the compliance and execution of that policy with all the other functions required to deliver higher education to its constituents. Applying principal-agent theory, in this case, allows for the examination of this type of government contract and its effect on incident reporting at the college or university level.

This theory helps explain both the relationship of state governments to public institutions and how state policies shape institutional behavior (e.g., are reports higher/lower in states with this state-level policy, and is the policy the cause of the fluctuation?) Answering these questions also requires the use of policy innovation theories to create a more robust analysis.

### **Policy Innovation and Diffusion as a Framework**

Utilizing the political science origins of policy diffusion research, Hearn et al. (2017) developed the conceptual model of state policy innovation and diffusion to more thoroughly understand why states adopt postsecondary policies. The conceptual model describes four primary contexts that provide more in-depth insight into the phenomenon: socioeconomic, organizational and policy, politico-institutional, and policy diffusion (Hearn et al., 2017). Based on research in political science, public policy, and higher education, this conceptual framework pulls together these lenses to compile a complete and more complex picture of legislative decision making for postsecondary policies. The socioeconomic context includes the state's demographics (e.g., population size, age distribution, race), educational factors (attainment, enrollment rates), and economic measures (growth state product, per-capita income, unemployment rates) (Hearn et al., 2017). The organizational and policy context, with roots in higher education, focus on the governance structure of institutions, research capacity of those institutions and finance indicators (e.g., postsecondary state funding, tuition, enrollment patterns, etc.) to more thoroughly understand the environment in which higher education is situated in state politics (Hearn et al., 2017). The politico-institutional context combines the governance structures of higher education and the political composition of the state's legislature (i.e., ideology, legislative professionalism, gubernatorial power and party affiliation, electoral conditions). With roots in political science (Walker, 1969) and higher education (McLendon et

al., 2006, 2007), the policy diffusion context includes the rationale for why states may adopt a particular policy due to external pressures. This context aims to classify if states learn from other states' policy adoptions to create their own, adopt a policy to better compete with other states, adopt policies due to regional or national pressures, or other outside "resource providers" (Hearn et al., 2017, p. 320). Each of the four contexts has been previously utilized in higher education policy adoption research in separate or isolated applications. Hearn's research team combined them for the first time in this conceptual model to provide a more comprehensive, less fragmented examination of policy adoption behaviors.

Research focused on policy innovation and diffusion at the state level has a rich history in political science. Early studies indicate a relationship between state population size and age, educational attainment, and adoption of more sophisticated, technical policies which tend to describe postsecondary legislation (Berry & Berry, 1990; Tandberg & Ness, 2011; Walker, 1969). Legislative professionalism and factors contributing to greater legislative decision-making capacity (Squire, 1997, 2007), political ideology (Berry et al., 1998), and higher education governance structure (Kivisto, 2005, 2008) have also been studied extensively in their role in the formulation and adoption of postsecondary policies.

Although this conceptual framework provides a more comprehensive understanding of state policy adoption and diffusion, particularly in the higher education industry, it is not yet widely applied. The framework helps address previously unanswered or atheoretical research questions. Studies utilizing this framework focus on topic-specific policy adoption (i.e., performance-based funding or campus carry legislation), professional association reports (e.g., State Higher Education Executive Officers Association), or further examination of interest groups' roles in policy creation. A glaring limitation of this conceptual model is that there are so

many variables and factors to include to examine one policy adoption decision that researchers may be unable to provide all necessary information to complete this conceptual picture. A researcher may address all four contexts partially, or some completely, and others not at all. Hearn and colleagues' (2017) model is a helpful tool in more fully understanding policy adoption decisions in higher education, yet requires granular attention to detail on an individual, organizational, and statewide levels to describe a state legislature's policy decision. Applied in this study, the policy innovation and diffusion model helps understand the treatment states' state policy context.

### **Conceptual Model for Understanding State Title IX Policy**

To more thoroughly understand the policy adoption context at the state level and policy effect at the institution level, I combine the policy innovation and diffusion conceptual model by Hearn et al. (2017) and Kivisto's (2005, 2008) perspective of principal-agent theory in higher education into a multi-layered model depicted in Figure 2.1. This framework provides insight into the policy contexts for the experimental states (California and New York) adopting this specific higher education legislation and how they are used as a policy lever addressing campus sexual misconduct. The principal-agent theory provides more detailed insight into the relationship between the state legislature and each four-year public institution obligated to comply with the policy.

One hallmark of the policy innovation and diffusion model is the detailed focus on the policy context for adoption, depicted on the left side of Figure 2.1. The model examines four significant themes in analyzing characteristics present for states to adopt higher education policy: socioeconomic context, organizational and policy context, politico-institutional context, and policy diffusion context. The policy diffusion context is excluded from this particular study

because this research does not aim to explore *why* the treatment states adopted the policy when they did but the effect of the policy's presence on institutional incident reporting. This study's interest is not on the spread or adoption of the policy per se but its effects. This study aims to examine the policy environment in California and New York to explain the conduciveness to adopting state-level Title IX laws directing higher education institutions to address this persistent issue. To do this, the policy innovation and diffusion framework will be applied using the socioeconomic, organizational and policy, and politico-institutional contexts.

California and New York are similarly organized in socioeconomic, organizational and policy, and politico-institutional contexts. Both large, densely populated states possess demographic, educational, and economic diversity. The predominant university systems within both states include large, four-year, public institutions governed by boards with systemwide authority and fiduciary responsibility (e.g., UC, CSU, SUNY, CUNY systems) to provide general oversight to institutions of higher education (Pechota et al., 2020a, 2020b). New York and California also possess similar political-institutional contexts. Often the states have legislators and government leaders affiliated with the Democratic party, a highly professionalized legislature, and long tenures of governors with influence over higher education administration and policy. Higher education governance in California and New York both consist of multiple major systemwide governing boards created by each state's constitution (Fulton, 2019). In Chapter Three, the control variables describing state policy adoption context are described in detail and account for variances in these characteristics to more accurately identify the policy effect under examination.

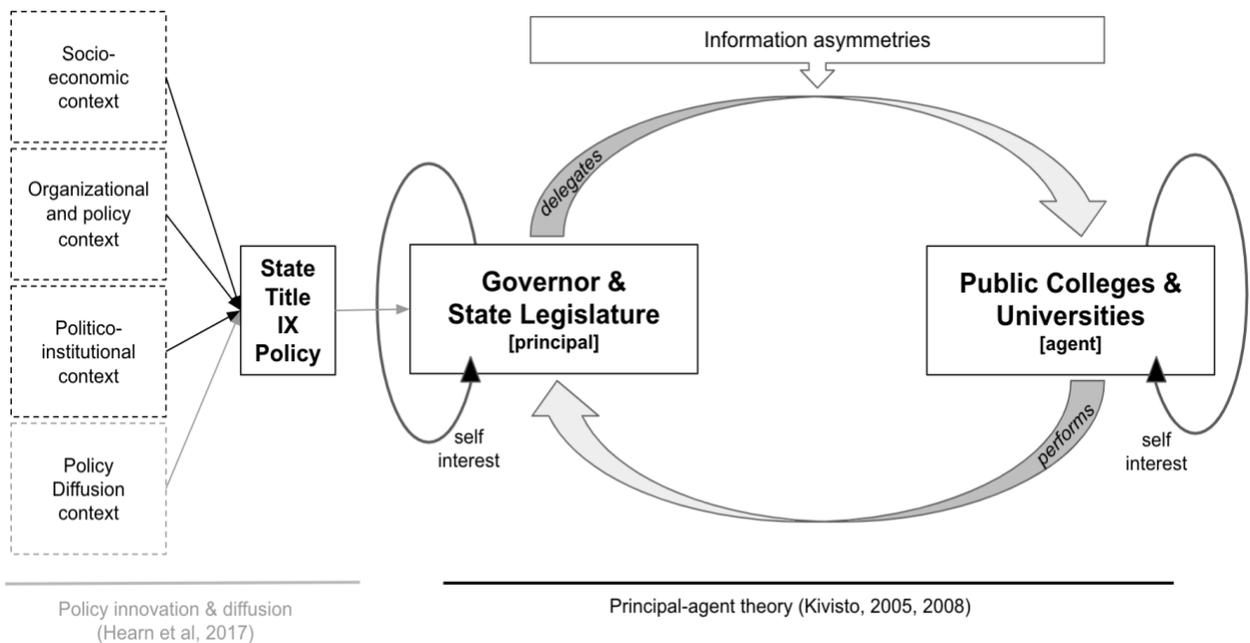
Principal-agent theory supplements the policy innovation framework by utilizing the state policy context to explain the policy implementation relationship between the legislature and

public, four-year institutions in the treatment states. This is depicted by the cyclical model on the right-side (see Figure 2.1). Although principal-agent theory applications are generally limited in higher education research to finance or accountability policy topics, the few studies mentioned above incorporating principal-agent theory demonstrated how this theory explains the relationship of state governments and public institutions and how state policies shape institutional behavior. The principal-agent relationship is applied to state legislatures and the public institutions within California and New York to examine the accountability relationship between the two entities. The state-level Title IX mandate serves as the contract detailing the relationship in this specific context. The state legislature has granted institutions the ability to provide postsecondary education to the state's citizens and eventually confer degrees to those students. With this state-level Title IX mandate, the legislature also requires institutions to record and respond to incidents of sexual misconduct in specific ways to access state funding. As the principal, it would be too costly or inefficient for the state to administer this service or manage the reporting process directly, hence the delegation of these powers to higher education institutions. As the agents, four-year public institutions in the treatment states are incentivized to comply with this contract otherwise face the significant consequence of losing state funding to the institution. Actors within the institution may have various resources available to implement policy compliance for this one specific initiative while addressing each institution's myriad other issues. An example of institutions' attempts at compliance with the policy is institutional policies about sexual misconduct often provided to students in a code of conduct or another foundational student behavioral contract. Proof of their compliance, or completion of the principal to agent contract, is reflected in institutional reporting of annual crime and sexual misconduct statistics to local police units or the state directly.

Taken together, the policy innovation framework and principal-agent theory explain the outcome of the adoption of the state-level Title IX policies in the treatment states compared to the control states. In other words, this conceptual model helps explain the effect of the state-level sexual misconduct policy on incident reporting at the institutional level compared to states that did not enact and implement this type of policy.

**Figure 2.1**

*Conceptual Framework Combining the Policy Innovation and Diffusion Model (Hearn et al., 2017) and Principal-agent Theory (Kivisto, 2007, 2008)*



## Summary

McLendon's (2003a; 2005; 2013) and Tandberg's (2014; 2011) assertions that state policies aimed at higher education innovations lack empirical evidence throughout the policy creation process remains true, despite the previous calls to action. Often policies aimed at holding colleges and universities accountable are created and implemented haphazardly, responding to the general public's dissatisfaction with the industry's overall performance. The gap is particularly evident in this study: the intersection of sexual misconduct on college campuses and state-level policy in higher education. Previous sexual misconduct research has focused on the individual student or institution level. This research allows for the broadening of understanding of this issue at the state level. Leaning on the growing literature about accountability policies (i.e., performance-based funding), this study aims to extend higher education policy research to a new topic area while utilizing theoretical frameworks commonly found in the literature.

This study endeavors to bring together the sexual misconduct literature and policy innovation literature to explain the effect of state-level Title IX policies on institutional-level sexual misconduct incident reports at public, four-year institutions in California and New York. This study draws from policy innovation and diffusion and principal-agent theory to explain how specific state characteristics and the presence of this state-implemented accountability policy lever affects campus sexual misconduct compared to states lacking this mandate. The primary research questions explored in this study are:

- 1) To what extent does the introduction of state-level Title IX legislation (Assembly Bill 1433) affect sexual misconduct incident reporting at four-year public institutions in California?

- 2) To what extent does the introduction of state-level Title IX legislation (Amendment 129B) affect sexual misconduct incident reporting at four-year public institutions in New York?

## **CHAPTER THREE RESEARCH METHOD**

This study examines the effect of state-level Title IX policy on campus sexual assault incident reporting in public four-year institutions in California and New York, utilizing principal-agent theory and the policy innovation model. This chapter covers five topics pertaining to the research method of this study. The research question discussed in the preceding chapters is reintroduced for context. A detailed description of the statistical method, difference-in-differences regression, and its relevant application are provided. An explanation of the data used in this quasi-experiment is presented; the variables' details are included. Robustness checks are discussed to ensure a sounder statistical model is used. Lastly, the limitations of the method are explained.

### **Research Questions**

The primary research questions explored in this study are the following:

- 1) To what extent does the introduction of state-level Title IX legislation (Assembly Bill 1433) affect sexual misconduct incident reporting at four-year public institutions in California?
- 2) To what extent does the introduction of state-level Title IX legislation (Amendment 129B) affect sexual misconduct incident reporting at four-year public institutions in New York?

### **Data**

Data was gathered from multiple sources to account for institutional and state-level context to best address the research question. The U.S. Department of Education's Integrated Postsecondary Data System (IPEDS) provides data related to state and institutional contexts - enrollment levels, funding information, and student demographics (e.g., sex). Collected annually

for several decades, IPEDS regularly serves as a reputable source for data used in higher education research. The U.S Department of Education Office of Postsecondary Education's campus safety and security data warehouse provides data related to institutional sexual misconduct reports. This database collects, annually, information from higher education institutions related to crimes occurring on- and off-campus (e.g., criminal offenses, hate crimes, VAWA offenses, arrests, disciplinary actions, unfounded crimes, and fire statistics) (Office of Postsecondary Education, n.d.). Criminal offenses and VAWA offenses are of particular interest to this study, as they serve as the measure of sexual assault and rape incidents reported by institutions on an annual basis. The research questions seek to measure specific state policies' effects on the frequency of sexual misconduct incident reports. The total incident reports per institution per year are the dependent variable. Incident reporting trends are reported at the state level. The random-effects difference-in-differences model examines the following independent variables: state appropriations, state grant dollars allocated, total enrollment, enrollment disaggregated by sex, and governing structure.

This study focuses on four-year public institutions in California and New York with 1,000+ full-time equivalent students in a given year. New York's policies apply to all higher education institutions, regardless of control (i.e., private versus public) (Regulation by Colleges of Conduct on Campuses and Other College Property Used for Educational Purposes, 2015). California's state law provides the most rigid guidance regarding institutional enrollment ultimately directing which institutions must abide by the policy (Student Safety, 2014). The 1,000+ full-time equivalent students threshold will be applied to both treatment states to help ensure more evenly comparable treatment groups. Enrollment numbers and Carnegie Classification categories are used to select treatment institutions within California and New York

and are derived from IPEDS. Seventy-four institutions are included in the treatment set: 10 institutions in the University of California system; 23 institutions in the California State University system; 30 institutions in the State University of New York system; 12 institutions in the City University of New York system. Information regarding institutional governance structure is taken from the Education Commission of the States (ECS) (Fulton, 2019). Data captured at the institutional and state levels help provide a complete picture of the sexual misconduct among college students and accounts for each treatment state's legislative policy context.

### **Description of Variables**

The research questions seek to measure the effects of specific state policies on the frequency of sexual misconduct incidents reported by institutions. Total incident reports are the dependent variable in this study, which tracks the number of reported sexual misconduct on college campuses in each year. This variable is also tracked for the control states. This study's key independent variable is the dichotomous variable indicating when California and New York implemented the respective state laws requiring higher education institutions to address campus sexual assault; this variable illuminates the policy effect. A series of control variables relating to institution enrollment, governance structure, and state funding mechanisms (state appropriations, state grant aid) are included in the study to isolate the policy effect more accurately. The variables based on dollar amounts are adjusted for inflation using the Consumer Price Index.

#### ***Dependent variable***

The dependent variable, total incident reports, is drawn from the Office of Postsecondary Education of the U.S. Department of Education via the Campus Safety and Security Statistics website database. Total incident reports refer to the composite number of the following types of

incidents occurring on- or off-campus for any given year between 2010 and 2019: forcible sex offenses, non-forcible sex offenses, rape, statutory rape, fondling, domestic violence, dating violence, and stalking. While some of these incidents are classified as crimes (non- and forcible sex offenses, rape, statutory rape, fondling) and some as violence against women (VAWA) behaviors (domestic violence, dating violence, stalking), all actions fall under institutional definitions of sexual misconduct regardless of criminal classification (Yung, 2015). In simpler terms, higher education institutions need to track all these behaviors to comply with state and federal Title IX regulations to address and respond to campus sexual misconduct. Information related to criminal sex offenses is available through the Campus Safety and Security statistics website as far back as 2001, while VAWA offenses are tracked from 2014 to 2019. For this reason, incident reports are a composite score of all sexual violence behaviors for any given year.

For this study, incident reports serve as the mechanism to measure behavior related to sexual violence on college campuses. Although research thoroughly documents why sexual violence incidents are underreported, the reports collected through the Campus Safety and Security database serve as the only national collection of sexual violence data reported from institutions every year. Simply, even though number of incident reports is not necessarily an accurate measure of the sexual misconduct occurring on college campuses, it is the closest metric available in detecting the presence of sexual violence in higher education.

### ***Independent Variables***

This study's primary independent variable is the dichotomous variable representing the treatment states' policy presence during the years it was in effect. For example, California enacted the state-level Title IX policy and required institutions to comply by July 1, 2015 (Student Safety, 2014); New York required compliance by October 1, 2015 (New York State

Education Department, n.d.). For years 2010 through 2014, the policy dummy variable is “off” or equivalent to zero. For years 2015 through 2019, the policy dummy variable is “on” or equal to one. Most control states lack the policy presence, as it was never implemented. Eight states included in control groups have some sort of state-level Title IX legislation in effect, yet none explicitly tie sexual misconduct response to state funding. Since those policies lack “financial teeth,” they are not included in treatment cases. They are also excluded from the never-adopter control group because some sort of legislation is in effect. The 31 remaining states in this sample do not have any state-level Title IX policy in effect, referred to as never-adopters. Tables 3.1, 3.2, and 3.3 list the control groups.

**Table 3.1**

*Control group for California: Members of the Western Interstate Commission for Higher*

*Education (WICHE)*

Regional Compact	Member States
WICHE	Alaska
	Arizona
	Colorado
	Hawaii
	Idaho
	Montana
	Nevada
	New Mexico
	North Dakota
	Oregon
	South Dakota
	Utah
	Wyoming

**Table 3.2***Control group for New York: neighboring states to New York*

Control Group	States
Neighboring states to New York	Connecticut
	Delaware
	District of Columbia
	Maine
	Maryland
	Massachusetts
	Michigan
	New Hampshire
	New Jersey
	Ohio
	Pennsylvania
	Vermont
	West Virginia

**Table 3.3**

*Control group for California and New York, national sample of Never-Adopters (as of April 24, 2019)*

Control group	States without State-level Title IX Policy
Never-adopters	Alabama
	Alaska
	Florida
	Georgia
	Idaho
	Indiana
	Iowa
	Kansas
	Kentucky
	Maine
	Massachusetts
	Michigan
	Mississippi
	Montana
	Nebraska
	Nevada
	New Hampshire
	New Mexico
	North Carolina
	North Dakota
	Ohio
	Oklahoma
	South Dakota
	Utah
	Vermont
	West Virginia
	Wisconsin
	Wyoming

### *Control variables*

Control variables aim to address exogenous factors and confounding variables related to the research question. Controlling for specific characteristics helps the researcher more accurately and confidently identify the treatment effect. The control variables in this study are state funding sources, enrollment patterns, and governing structures for four-year public institutions with 1,000+ full-time equivalent students in a given year. Each control variable is time variant, except for governance structure. No institution changed its governing structure in the sample time. Holding these variables constant in the models allows a more accurate focus on the variable of interest: the policy effect.

**State Appropriations.** The federal Title IX legislation dictates that institutions receiving federal funds must comply with the law (i.e., address sexual misconduct) or forfeit those funds. Similarly, the California and New York state-level Title IX policies dictate that institutions must comply with the policy and submit evidence of doing so annually or risk forfeiting state funding to those institutions. This variable is a composite score of two IPEDS indicators: state appropriations and state operating grants and contracts. State appropriations include funds dictated by the state legislature for institutional operating expenses, not specific contracts or projects (National Center for Education Statistics, 2021). IPEDS defines state operating grants and contracts as revenues from the state government agencies that fund research projects or other programs classified as operating revenues (National Center for Education Statistics, 2021). The combined calculation of these two variables collected by IPEDS provides a more comprehensive depiction of the monies allocated to institutions by the state government. This variable is measured in U.S. dollars and adjusted for inflation.

**State Grant Dollars.** The state policies from California and New York specify the connection between compliance and receiving state financial support. Like state appropriations, a significant source of financial support for four-year public institutions comes from state grant monies. Since appropriations and grant dollars are allocated through different legislative processes, the variables are included separately instead of one composite variable describing funding. Like federal Title IX mandates, California and New York institutions can be at risk of losing “any state aid or assistance” for noncompliance (Regulation by Colleges of Conduct on Campuses and Other College Property Used for Educational Purposes, 2015). IPEDS (2021) defines state non-operating grants as monies given to institutions from state governmental agencies provided on a non-exchange basis. This variable is measured in U.S. dollars and adjusted for inflation.

**Institutional Enrollment.** The California state-level Title IX policy explicitly applies to institutions with 1,000 or more enrolled students. This same threshold is applied to the applicable New York institutions of higher education to create a more comparable treatment group. The California statute does not indicate whether this enrollment threshold is determined from fall or 12-month enrollment numbers. Since fall enrollment numbers may capture a skewed enrollment picture, 12-month enrollment numbers are included as total institutional enrollment. IPEDS provides data for 12-month total enrollment by sex (i.e., male, female) and race (i.e., American Indian or Alaska Native, Asian, Black or African American, Hispanic, Native Hawaiian or Other Pacific Islander, White, two or more races, race/ethnicity unknown, nonresident alien). Total enrollment is represented in this study as the sum of female enrollment and male enrollment in the analysis.

**Governance Structure.** Including the governing structure within the statistical test helps control for the state-to-institution relationship. These institutions' governing boards have a statutory and fiduciary responsibility to each member institution pertaining to its operation and overall success, including the response to campus sexual assault. For example, the California policy explicitly names the California Board of Regents as an entity involved in implementing the law and gaining compliance. To account for a wider variety of governing structures of states included in the comparison groups, this variable is coded as a categorical variable (i.e., no governing structure = 0; coordinating board = 1; governing board = 2; governing and coordinating boards = 3; advisory board = 4). Because governing structures are included in the model as a control variable, using states with similar governing systems as a control group is not possible. The California State University System governs 21 institutions, and the University of California System governs ten. Thirty institutions are governed by the State University of New York system, and 13 by the City University of New York system. Governing structure data were provided by the Education Commission for the States.

### **Comparison Groups**

To strengthen this statistical model and isolate potential policy effects more accurately, control groups are used to detect and address bias. Three comparison groups serve as the control or counterfactual for California and New York. California's control groups include WICHE compact states (see Table 3.1) and a national sample of states that never adopted a state-level sexual assault policy for institutions of higher education (see Table 3.3). New York's control groups include neighboring states (see Table 3.2) and a nationwide sample of states that never adopted the policy (see Table 3.3). Unlike California, New York does not belong to a regional compact; thus, neighboring states are a comparable control set. Utilizing a regional compact or

neighboring states as comparison groups capture some intangible regional characteristics that may also be present in the treatment states. Finally, “never-adopter” states serve to plausibly demonstrate what could have happened in California and New York with institutional sexual misconduct incident reports had either legislature not passed the policies. Taken together, all comparison groups will help more accurately specify the treatment effect of the state-level policy in California and New York.

### **Analytic Framework**

Since this study is novel in nature, it is critical to examine the data with descriptive statistics to uncover basic information about this natural experiment. Descriptive statistics provide baseline information about both dependent and independent variables, examining state context and patterns of sexual misconduct reporting. Statistics like means, ranges, standard deviations, and tabulations (for the categorical variable) are assessed to provide an overview of the data for all variables. Part of this descriptive analysis examines the means of incident reports for the treatment states before and after the passing of the state-level Title IX policies. Descriptive statistics may illuminate general sexual misconduct reporting trends for California and New York institutions and the various control groupings of states. Simple line graphs are utilized to visually examine California and New York data trends and control states over time. Taken together, this initial exploration of the data illuminates some fundamental trends that will aid in the subsequent, more advanced quantitative analysis.

### **Difference-in-Differences Regression**

This study utilizes difference-in-differences (DID) regression, an extension of Ordinary Least Squares (OLS) regression. Often, OLS estimation is used to examine cross-sectional data, measuring a phenomenon and its relationships for one period of time or a singular measure

(Zhang, 2010). The data compiled for this study include repeated measures on treatment and control states from 2010 through 2019, creating a time-series/cross-sectional data set or panel data set (Zhang, 2010). For this reason, simple OLS estimations are insufficient to accurately capture causal relationships for panel data, as this data set examines reporting behavior over nine years.

DID is a quasi-experimental, causal inference technique used commonly in higher education research to examine the effect or impact of higher education policies. It has previously been applied to performance-based funding studies (Hillman et al., 2015; Tandberg & Hillman, 2014) and promise programs (Delaney & Hemenway, 2020), examining the effects of the presence of these policies on degree productivity outcomes. DID serves as a good causal estimation method when randomized control trials are not possible or ethical in the research design, often the case when examining higher education policy (Furquim et al., 2020). Simply put, the DID technique compares the pre-and post-treatment scores of a group receiving a particular intervention to a control group not receiving the intervention during the same observation period. This technique requires panel data to be most effective: measuring numerous variables over a series of time, not one cross-section of time (Zhang, 2010). The purpose of utilizing DID models is to identify and measure an intervention's average effect over time while examining similar outcomes for an untreated group over the same period (Lechner, 2011). Higher education researchers employ this method for its simplicity, flexibility, and general applicability to the field (Furquim et al., 2020). Further, this method capitalizes on the natural experiments that can take place in higher education: a state government implementing a policy; institutions unable to self-select into this "treatment" with some institutions being exempt from participation; and policymakers eager to see the effects of the legislation between the groups.

In its simplest form, DID measures the mean difference in scores in the treatment group prior to and after an intervention is administered. The goal of this technique is to detect the difference between the average treatment effect (pre-and post-treatment) and the average scores in the control group (pre-and post-treatment) to produce the DID estimator ( $\delta$ ). The following equation demonstrates this:

$$\delta_{\text{DID}} = (\bar{Y}_1^T - \bar{Y}_0^T) - (\bar{Y}_1^C - \bar{Y}_0^C) \quad (1)$$

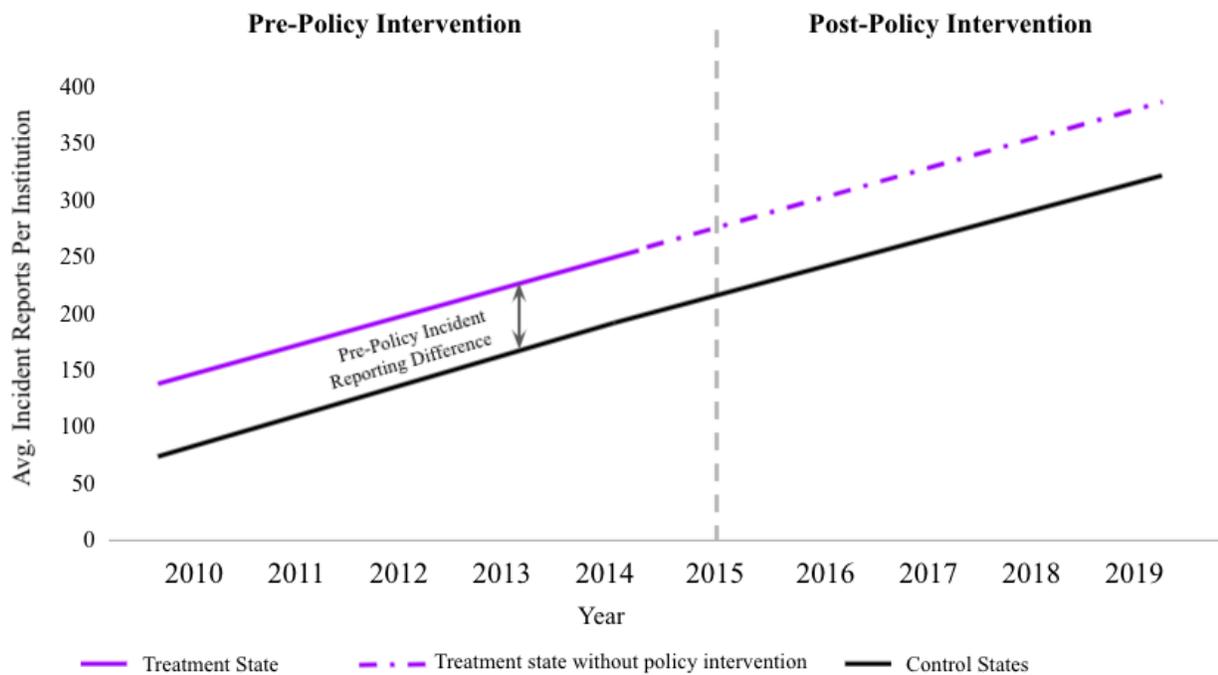
As this equation shows, the difference-in-differences is a mean score, describing a constant effect over time. The DID estimator consists of the difference between the post-treatment mean and pre-treatment mean of the treated group, shown as  $\bar{Y}_1^T - \bar{Y}_0^T$ , and the post-treatment mean and pre-treatment mean of the control group, shown as  $\bar{Y}_1^C - \bar{Y}_0^C$ . In some cases and applications, this may be true. In others, possibly higher education policy analysis, there may be an uneven treatment effect over time. For example, policies may take time to implement after being enacted in the legislature, showing weak effects in the early years and more robust in later years. In this simple example, this equation demonstrates one treatment group and one control group observed in a simple pre-and post-intervention model. As will be described further, this research model utilizes two treatment cases, California, New York, and multiple control groups over nine years.

DID may seem like a complex quantitative analysis but can be easily explained with visual aids. Figures 3.1 and 3.2 visually represent a hypothetical sexual misconduct incident reporting scenario in treatment and control states; California is used in this illustrative example. Figure 3.1 shows the average incident reports per year between 2010 and 2014 for four-year public institutions in California compared to a control set. It also demonstrates hypothetical measurement about the average trend of incident reporting for the same groups into the future.

This graph illustrates both groups increasing incident reporting levels at the same rate as the 2010-2014 period. However, California implemented its state-level Title IX policy, which may cause higher average incident reporting rates in that state, represented by Figure 3.2. This graph displays hypothetical observed results of average sexual misconduct incident reports after the state-level Title IX policy took effect, in this example leading to higher levels of incident reporting in California compared to other states.

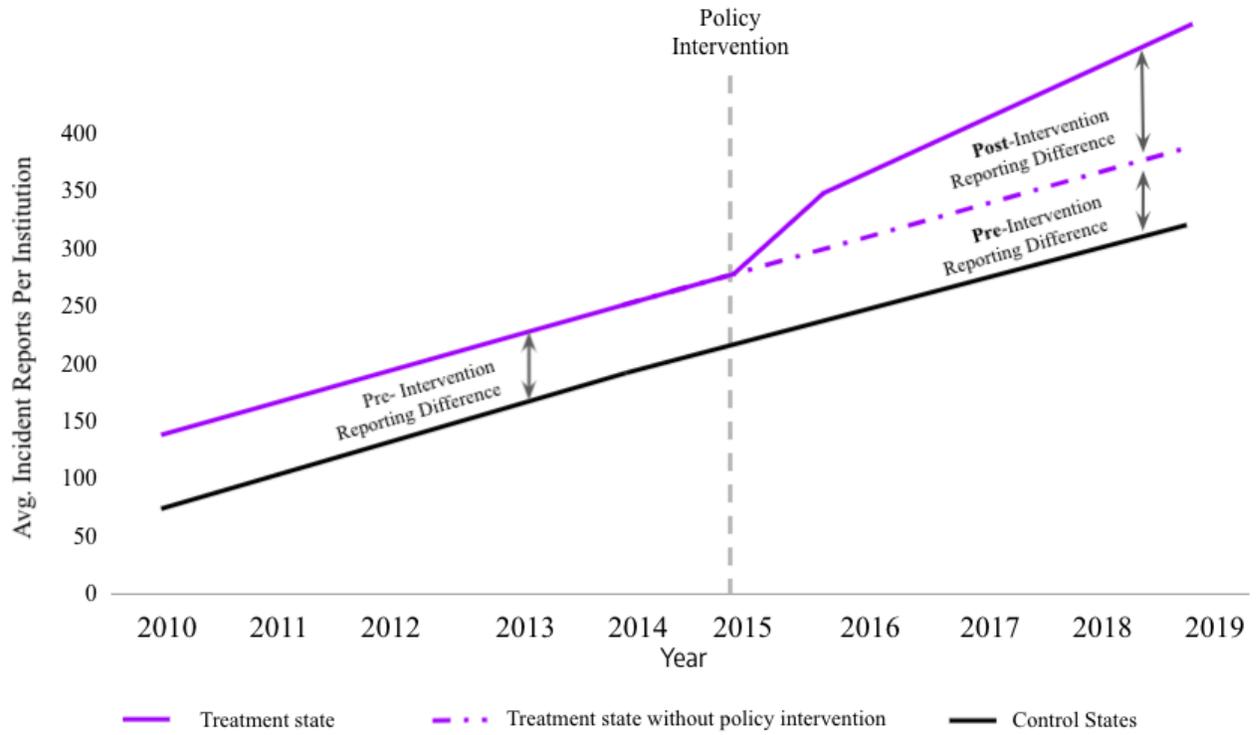
**Figure 3.1**

*Hypothetical Average Sexual Misconduct Reports Received by Institutions in Treatment and Control States Between 2015 and 2019*



**Figure 3.2**

*Example of Difference-in-differences Estimation of Sexual Misconduct Incident Reporting*



Utilizing the concept of DID in regression allows higher education researchers to include additional control variables and more accurately specify the causal model (Furquim et al., 2020). The following equation demonstrates the DID regression technique, including the presence of the treatment or not, the years in which the treatment is applied, an interaction term of the treatment and treatment years, a vector for relevant control variables, and the specified error term (Furquim et al., 2020; Lechner, 2011; Wing et al., 2018).

$$y_{ist} = \alpha + \beta_1 \text{Treat}_{ist} + \beta_2 \text{Post}_{ist} + \delta_{\text{DID}} \text{Treat}_{ist} * \text{Post}_{ist} + \theta \text{Cov} + \omega_s + \pi_{is} + \varepsilon_{ist} \quad (2)$$

In this equation,  $y$  represents the outcome variable for a given institution ( $i$ ) within a given state ( $s$ ) at a given time ( $t$ ). Applied to the context of higher education policy analysis,  $y$  represents the outcome under study for  $i$  state at  $t$  time (e.g., California in 2017), state-level sexual misconduct incident reports for a given year. Sexual misconduct incident reports are defined as total reports from on- and off-campus forcible sex offenses, non-forcible sex offenses, rape, statutory rape, fondling, domestic violence, dating violence, and stalking. Since institutions within the treatment states can be observed before the policy enactment and implementation, the model can account for specific pre-policy levels of incident reporting. The alpha ( $\alpha$ ), or intercept in this equation, represents the pre-policy implementation levels for the outcome variable for the control states.  $\beta_1$  parameter represents if the treatment is present or not.  $\text{Treat}$  represents the presence of the treatment or policy implementation as a dichotomous variable;  $\text{Treat} = 1$  to indicate the policy is in effect for the treatment group,  $\text{Treat} = 0$  to indicate the policy is not in effect for the control group.  $\beta_2$  represents the change in incident reporting in control states after implementing state-level Title IX policies.  $\text{Post}$  also serves as a dichotomous variable demonstrating when the policy took effect; in time periods  $t$  where the policy was not in effect,  $\text{Post} = 0$ . In time periods  $t$  when the policy was in effect,  $\text{Post} = 1$ . The interaction term, the multiplication of the DID estimand

and the dichotomous treatment variable, captures the treatment effect for the years the policy was in effect. This is the main variable of interest. This shows the treatment effect of the state-level Title IX policies in California and New York on sexual misconduct reporting: increasing, decreasing, or no change in reporting levels. The vector of covariates ( $\theta Cov$ ) represents the control variables included in this study: governing structures, enrollment patterns, state funding levels. These variables are added to more accurately specify the models and lessen the possibility of unexplained variation to identify the treatment effect more precisely (Furquim et al., 2020). This equation contains three error terms: one at the state level,  $\omega_s$ , one at the institution level,  $\pi_{is}$ , and finally for each institution in a given state for a given time point,  $\varepsilon_{ist}$ . Then,  $\pi_{is}$  is modeled as a random effect, while  $\omega_s$  is captured by state fixed-effects. Standard errors are clustered at the state level since most of this study's variables are measured from this perspective.

Addressing issues related to the estimation of error terms, several statistical tests can check the fundamental assumptions of regression. Since DID models often examine states' outcomes over time, it is common to encounter serial correlation in the analysis if left unaddressed. Serial correlation describes the non-random relationship of error terms over time, which can often be present in non-randomly selected samples (Lechner, 2011; Reichardt, 2019). Serial correlation refers to the statistical assumption that the error for one time period is not correlated to the error for subsequent time periods. Failure to address serial correlation can result in underestimated standard errors, wrongfully rejecting the null hypothesis (i.e., Type 1 error) (Furquim et al., 2020). In other words, failure to correctly estimate standard errors could indicate there is no policy effect when indeed one exists. This study checks for the homoscedasticity of the error terms in the DID model, meaning the error term does not vary significantly as the

dependent variable changes. If the error term does vary significantly, heteroskedasticity exists, and robust standard errors will be used in the analysis. Finally, cross-sectional dependency is examined to determine if data are correlated across units, in this case, states. The final statistical models will be specified based on the results of these tests.

### **Using Difference in Differences to Analyze State Sexual Misconduct Policy**

Two states are in the treatment sets or experimental groups: one treatment group for California and one treatment group for New York. The California legislature enacted the Student Safety bill in 2014. The policy dictates that colleges and universities governed by the University of California and California State University systems must report incidents of sexual misconduct to the state on an annual basis, lest they wish to lose Cal Grant and other state aid (Student Safety, 2014). The state of New York enacted similar, but not identical, legislation. It requires the institutions governed by its regents (i.e., State University of New York and City University of New York) to compile and report incidents of sexual misconduct to the state by a specific deadline or the institution “shall not be eligible to receive any state aid or assistance until such certificate of compliance is duly filed.” (Regulation by Colleges of Conduct on Campuses and Other College Property Used for Educational Purposes, 2015). These two states and the four-year public institutions within them are accountable to a state governing agency to report metrics on the frequency and type of sexual misconduct incidents, and secondarily, how the campus is addressing sexual misconduct. This study focuses on the most fundamental pieces of the policies: the legislation’s effect on incident reporting levels.

In this study, 2010-2014 serve as the pre-treatment years since neither the California nor New York policies were in effect. The years 2015-2019 serve as the treatment years. This was when the California and New York policies were in effect for the mentioned institutions (i.e.,

institutions within the UC, CSU, SUNY, CUNY systems). This same time frame also includes more detailed reporting mechanisms related to sexual misconduct provided by the Campus Safety and Security database warehouse. The difference between the treatment groups and the control groups during the 2015-2019 years compared to the treatment and control groups during 2010-2014 will determine the effect of the state-level sexual misconduct policies on campus incident reports, if any.

Two DID equations will be used for each treatment state to analyze the effect of a state-level Title IX policy on state-level sexual misconduct incident reports. The first method is a constant effects approach, or uncovering the average treatment effect on the treated (ATET): one treatment group; one control group with pre-and post-treatment time periods assuming constant effects (i.e., equation 2) (Furquim et al., 2020). This approach assumes a constant average treatment effect over the treatment years.

Additionally, this study will include a DID model with varying time effects for each treatment state. This method will explore if the presence of the state-level Title IX policies is constant over time or vary in strength by year, seeing the biggest effects when first implemented and dissipate over time. It is reasonable to posit that the full presence of the policy may need additional time after implementation to become fully realized; institutions may need to change reporting systems or increase human resources around supporting the prevention of campus sexual misconduct. Making those changes across the institution requires time to ensure more accurate understanding, thus compliance. In the equation below, each post-policy year is parameterized separately to see if and when California or New York experienced changes in sexual misconduct reporting levels. The variation is demonstrated here (Burczek Dreier, 2018):

$$y_{ist} = \alpha + \beta_1 Treat_t + \tau_{1...4} Post_{t1...4} + \lambda_{1...4}(Treat_t * Post_{t1...4}) + \theta Cov + \omega_s + \pi_{is} + \varepsilon_{ist} \quad (3)$$

In this iteration,  $y$  represents the outcome variable for a given institution ( $i$ ) within a given state ( $s$ ) at a given time ( $t$ ). Like equation 2,  $\alpha$  represents the intercept, the pre-policy implementation levels for the outcome variable.  $Treat_t$  represents the dichotomous variable to demonstrate the state-level Title IX policy presence for  $s$  state. Each post-policy year for the comparison states is parameterized in  $\tau_1$  for the first post-policy year (e.g., 2016) through  $\tau_4$  for the fourth post-policy year (e.g., 2019). To capture treatment states' response,  $\lambda_1$  accounts for California or New York's incident reporting levels in the first year after the respective state Title IX policy was enacted (e.g., 2016); again, separate parameters exist for each year after the policy was implemented for treatment states (i.e.,  $\lambda_4$  representing the fourth post-policy year of 2019). Like equation 2, this model accounts for the vector of control variables treatment and control states: enrollment, state appropriations, grant monies, and governance structure. Ultimately, this model allows the analysis to happen on a per-year basis, examining the treatment effect each year the state-level Title IX policy is in effect for California and New York. This modification rejects the previous assumption that the treatment effect is constant over time and provides a more accurate understanding of the policy "strength" on a per-year basis.

The complementary analyses attempt to see the policy effect from two differing perspectives, each used to address the other approach's shortcomings. Ultimately, the DID estimation design will illuminate the effect of state-level Title IX policies on sexual misconduct incident reporting. Subsequently, the models will also examine the relationship between the dependent and independent variables and help detect the most relevant indicators that affect campus sexual misconduct reports. Taken together, the results from these models can provide more in-depth insight into the policy effects, helping states determine if this is an appropriate or valuable policy lever to address campus sexual misconduct.

## **Robustness Checks**

To thoroughly examine the difference-in-difference model's specification to ensure it accurately detects a policy effect, placebo tests will be simulated in both models and all control groups. The placebo tests will illuminate if there is another effect not captured by the DID equation; in other words, this falsification test will help determine if the state-level policy affects campus sexual misconduct reporting or if it comes from some other variable not included. To conduct this falsification test, a random pre-treatment (i.e., a year between 2010 and 2014 when neither the California nor New York policy was in effect) year will be used in the DID model. The falsification test should produce non-significant results in the pre-treatment period, meaning other indicators were not influencing campus sexual misconduct reports at select four-year public institutions in California and New York.

## **Assumptions**

To make statistical analysis possible, given the limitations of the data, some assumptions must be applied for this study. Because there is no other metric to more accurately capture how many incidents of sexual violence happen on any one college campus during a given year, incident reports will be considered the measure of sexual misconduct on college campuses. Additionally, due to the severe underreporting of sexual misconduct previously discussed, this study may not capture the true reporting effect, instead capturing the reporting of sexual misconduct incidents. This study also assumes that policy-adopting states and non-adopting states follow the same general incident reporting trend over time.

## **Limitations**

While this study conducts tests of robustness to verify the accuracy of results, there are limitations associated with this DID regression approach. Two general categories of limitations

include the study design and sample and missingness of the data. Regarding the design and sample, any other policy or practice changes in the treatment states at the same time as the state-level Title IX policy implementation could bias the results and interpretation. For there to be a detectable causal effect associated with the state Title IX policy, there cannot be any other significant policy changes in 2014-2015 that are not related to California Assembly Bill 1433 or New York Amendment 129 A and B. Additionally, the California and New York legislation is similar in principle, but it is not identical. It is similar in that both state policies mandate sexual assault response and tie that response to state funding. They differ in that New York's requirements are higher than California's and apply to more types of institutions within the state regardless of state funding. These policies also include mandates about training and prevention, yet this study captures only the reported outcome: incident reports. The "bundling" of this state-level Title IX policy may make it more challenging to detect an effect on incident reports if one exists. This "bundling" also makes it more difficult to separate which portion of the legislation most directly affects incident reports: is it the training requirements, behavioral intervention, or the reporting mechanisms that have the most significant effect on campus sexual assault?

Although the treatment and control groups' sample only describes approximately half of the United States, a sufficiently large sample, this study examines only the four-year public institutions with an enrollment larger than 1,000 full-time equivalent students. This is a smaller subsection of institutions in the United States and not representative of the higher education industry in total. Although this study discusses the impact of these state-level Title IX policies on these institutions, analyzing these results to apply to a broader sample should be limited.

Each treatment state is compared to two control groups to identify the policy effect. California is compared to a regional compact of states, some of which enacted some type of

state-level sexual assault policy, and others never adopted such legislation. The states that possess a state-level policy (Colorado, Hawai'i, Oregon, Washington) are included in the statistical model because the policies differ significantly from California legislation. New York will also be compared to neighboring states, as the state does not belong to a regional compact. Similar to California's regional compact members, New York's neighboring states (Connecticut, Delaware, District of Columbia, Maryland, New Jersey, and Pennsylvania) adopted some sort of state-level Title IX legislation. New York will be compared to all neighboring states ( $n = 5$ ) in addition to its secondary neighbors ( $n = 8$ ) to produce a control set large enough to produce statistical power to complete the analysis.

Another potential limitation lies within the data itself: missingness. Some institutions may not have reported all categories of incident reports for a given year or could have reported zero for any category for any year. It can be assumed that the data are not missing at random; institutions that do not report any reports are different than institutions that report zero reports for any given year (Reichardt, 2019). While not affecting the statistical examination of this study, it is essential to note the data collected in this study does not capture the sex nor gender of the reporter, race, age, or other relevant social identifiers that would lend to a more complex understanding of who reports and experiences campus sexual misconduct.

Finally, the traumatic nature of these incidents of sexual misconduct creates another obstacle to address. The severe underreporting of sexual violence makes it difficult to place too much weight on the insights produced from this study. If only 10% of sexual violence incidents on college campuses are being reported, it is difficult to measure this state-level policy's real impact (National Sexual Violence Resource Center, 2018; RAINN, 2018). Acknowledging this

limitation is critical and does not preclude the study from revealing significant findings; however, its predictive ability must be used judiciously.

## **CHAPTER FOUR**

### **RESULTS**

This study examines the effect of state-level Title IX policies on campus sexual assault incident reporting in four-year institutions public in California and New York, and asks the following research questions:

- 1) To what extent does the introduction of state-level Title IX legislation (Assembly Bill 1433) affect sexual misconduct incident reporting at four-year public institutions in California?
- 2) To what extent does the introduction of state-level Title IX legislation (Amendment 129B) affect sexual misconduct incident reporting at four-year public institutions in New York?

The results in this chapter are organized by state: examining the policy assuming a constant time trend, then examining the policy effect using a model that estimates the effect at different time points for California and the respective control groups. Following, the same process is repeated for New York. First, a series of descriptive statistics are discussed, including a graphical representation of the dependent variable. Next, the first statistical model for each state that assumes a constant relationship between the control and dependent variables is presented using difference-in-differences regression. Placebo tests are conducted for each treatment state with both control groups (academic compact or neighbors, nationwide never-adopters). Then the process is repeated by utilizing a time-varying model to examine if the policy effect differs from year to year. Once again, placebo tests are conducted for each state with the

various control groups to understand the policy effect more precisely. The chapter concludes with a summary of the results.

### **The Nature of Sexual Misconduct Reporting**

Before exploring the data and the effect of state-level Title IX policies on sexual misconduct reporting, it is critical to place it within the context of the legislation that dictates reporting from institutions. When all data was collected, cleaned, and reformatted for analysis, large portions of missingness were present for certain sub-variables of the main outcome variable. Roughly 40.6% of observations were missing for VAWA on-campus incident reports (*vawaon*), 50.5% for VAWA off-campus incident reports (*vawaoff*), and 50.4% for VAWA on-campus housing incident reports (*vawahouse*). Although significant missingness presents analytic challenges, this captures the complexity of the reporting nature of the higher education institutions across the United States. Further, due to the *Violence Against Women Act* legislation, the Office of Postsecondary Education within the Department of Education began recording VAWA incident reports in 2014, only one year before the policy intervention.

Contrary to VAWA reporting trends, Clery crime reports, which include categories of sexual misconduct reports, did not reveal severe missingness. On-campus Clery incident reports, (*cleryon*), only contained 1.8% missing observations. Off-campus Clery incident reports (*cleryoff*) contained 25.6% missingness, and on-campus housing Clery incident reports (*cleryhouse*) with 18.9% missing observations. Clery reports contain five categories of incident reporting, while VAWA reports contain three. The Department of Education also began collecting Clery crime statistics for the categories of reports several decades prior to the reporting requirements put in place by VAWA.

Two treatment states and 39 other states are included in this study. California and New York serve as the treatment states, with two specific state-level Title IX policies that directly tie institutional compliance to state funding sources. At the most basic level, each state is required to report incidents of sexual misconduct on an annual basis; failure to do so triggers forfeiture of state grant monies or other forms of state aid. These policies were selected as the treatment cases for the strength and direct connection to a penalty for non-compliance. Eight other states included in control groups have some sort of state-level Title IX legislation in effect, yet none explicitly tie sexual misconduct response to state funding. Since those policies lack “financial teeth” they are not included in treatment cases and are also excluded from the never-adopter control group because there is some sort of legislation in effect. The 31 remaining states in this sample do not have any state-level Title IX policy in effect.

### **Descriptive Statistics**

A series of descriptive statistics represent information on the public four-year institutions within the sample (e.g., 40 states and the District of Columbia) between 2010 and 2019. Table 4.1 shows the overall summary statistics of all variables included in the dataset. All monetary values are adjusted to and reported in 2019 constant dollars using the Consumer Price Index. Since the research questions focus on the effect of a policy intervention in two treatment states compared to states without the policy intervention, descriptive statistics are shown in this manner in Table 4.2: treatment states versus control states, pre-intervention versus post-intervention summary statistics.

**Table 4.1***Descriptive Statistics, All States (n = 41)*

	<i>N</i>	Mean	<i>SD</i>	Min	Median	Max
Total Incident Reports	5110	20.17	49.47	0	7	1883
State appropriations, millions	4783	\$85.24	\$110	0	\$44.6	\$800
State grant monies, millions	4793	\$81.93	\$108.4	0	\$41.5	\$800
Total enrollment	5110	14,790	14,005	0	9.821	100,855
Governance Structure		--	--	--	--	--
None	710 (13.89%)					
Coordinating Board	876 (17.14%)					
Governing Board	1,998 (39.1%)					
Governing & Coordinating	1,196 (23.41%)					
Advisory Board (Ohio only)	330 (6.46%)					

**Table 4.2***Descriptive Statistics by Group Pre- and Post-policy Intervention*

	<b>California Pre-Policy</b>	<b>California Post-Policy</b>	<b>New York Pre-Policy</b>	<b>New York Post-Policy</b>	<b>All Other States Pre- Policy</b>	<b>All other States Post-Policy</b>
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Total incident reports	9.31 (15.83)	33.66 (71.40)	5.45 (8.00)	25.10 (55.66)	8.95 (15.49)	32.91 (70.07)
State appropriations, millions	\$81.5 (\$104)	\$91.6 (\$116)	\$80.7 (\$104)	\$89.1 (\$114)	\$79.9 (\$101.5)	\$89.5 (\$115)
State grant funding, millions	\$78.4 (\$103)	\$88.2 (\$115)	\$77.7 (\$102)	\$85.8 (\$113)	\$76.8 (\$100.5)	\$86.1 (\$113.5)
Total enrollment	14,826 (13,781)	15,075 (14,369)	14,062 (13,637)	14,749 (14,020)	14,704 (13,828)	14,941 (14,518)

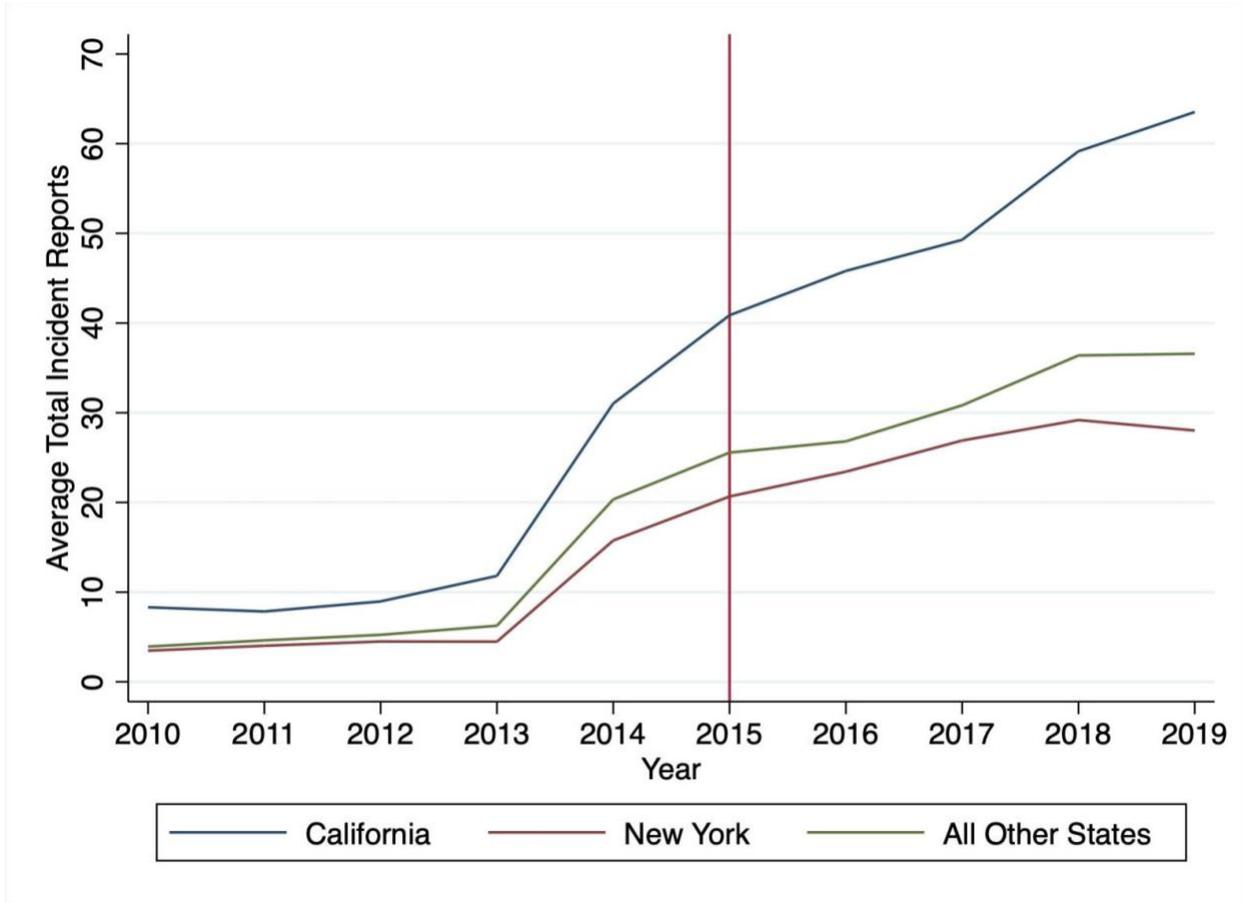
## **Total Incident Reports**

Six variables describe the total incident reports per year per institution: Violence Against Women Act (VAWA) reports from incidents that occur on campus; VAWA reports from incidents that occur off-campus; VAWA reports from incidents that occur in on-campus housing facilities; Clery reports from incidents that occur on campus; Clery reports from incidents that occur off-campus; and finally, Clery reports from incidents that occur in on-campus housing facilities. The summation of each type of incident report per institution per year is reflected in the variable *total incident reports*, the primary outcome variable in this study. From 2010 to 2019, the overall mean of total incident reports was 20.17 across all four-year public institutions in the analytic sample, regardless of state-level Title IX policy presence; total incident reports ranged from zero to 1,883. Before the state-level Title IX policy intervention (2010-2014), the mean of incident reports varied slightly: California with 9.31 incident reports; New York with 5.42; and non-treatment states at 8.95 incident reports. After the policy intervention (2015-2019), the mean total incident reports increased: California with 33.66; New York with 25.1; and other states with 32.91 incident reports.

When examining the different types of incident reports, no distinct category of incident reports decreased over time. All four types of incident reports that took place on-campus (*vawaon*, *vawahouse*, *cleryon*, *cleryhouse*) occurred in higher rates, and had lower rates of missing data. Although off-campus incident report indicators (*vawaoff*, *cleryoff*) were not as complete as on-campus records, these categories of incident reports also increased over time.

**Figure 4.1**

*Mean Incident Reports for California, New York, and All Other States*



## **State Appropriations**

California Assembly Bill 1433 and New York Amendment 129-B require reporting compliance from public four-year institutions to receive state funding, or specifically, state appropriations. The average state appropriation across four-year public institutions is \$85.2 million. State appropriations range from \$1.1 million to \$800 million; these figures were adjusted for inflation. The state of Colorado changed its funding allocation process to public institutions in the fiscal year 2006, eliminating state appropriations as typically reported in IPEDS (Burczek Dreier, 2018). The state appropriation values are missing for any Colorado public institution between 2010 and 2019. Approximately 6% of observations did not report state appropriations for a given year.

## **State Grant Dollars**

Like state appropriations, state grant money is considered part of state funding made available to California and New York four-year public institutions compliant with the state Title IX reporting requirements. The average state grant dollars provided to public four-year institutions was \$81.9 million. Grant dollars provided to institutions by state legislatures range from \$0 to \$800 million. Thirty-one institutions did not report grant money received (i.e., 6% of observations do not include state grant dollars for a given year).

## **Total Enrollment**

The average enrollment at a four-year public institution between 2010 and 2019 is 14,790 students. When disaggregated by sex, the average female enrollment was 8,246 students, and the average male enrollment was 6,676 students. The overwhelming majority of institutions reporting both male and female enrollment numbers; only 1% of institutions did not report enrollment numbers for either female enrollment or male enrollment. This study uses enrollment

data as collected and reported by IPEDS and the U.S. Department of Education, which is presented in a sex binary of male/female. The use of this language is problematic in two ways: it passively insinuates the conflation of gender and sex and reinforces the false hegemony of binary gender descriptors. The implications of the continued use of this harmful binary is further discussed in Chapter Five.

### **Difference-in-Differences Analysis for California AB 1433**

I conducted a series of difference-in-differences (DID) estimates to examine the effect, if any, of state-level Title IX policies on sexual misconduct incident reporting levels. Models include a dichotomous variable for California four-year public institutions, and any post-policy period (i.e., 2015-2019). The interaction of the state-level policy and post-intervention period (e.g., *castix\*post*) identified the unique effect of the state-level policies in the treatment states after the legislation took effect. The first analysis examined the average policy effect throughout the post-intervention period, utilizing a random-effects model with state and year fixed-effects. It investigated the average policy effect over the sample time period, the average treatment effect on the treated (see Table 4.3, column 1 and 2). I studied the California policy within the context of regional compact states (WICHE), and a national group of states that never adopted a state-level Title IX policy.

To examine the policy effect more precisely, it was critical to employ a model that estimated the effect at different time points to reveal year-to-year effects. This set of models follows the same protocols and general equation of the previous average policy effect DID model yet adds the examination of the policy effect on a per-year basis instead of grouping all post-intervention years together (see Table 4.3, column 3 and 4). It is reasonable to assume that institutions would better comprehend the legislation, thus reporting and compliance requirements

as time passes. This may allow for increased reporting of sexual misconduct incident reports on campus and produce higher overall reporting frequencies at the state level. Again, the time-varying model was run for California with two comparison groups: WICHE states, national never-adopters.

**Table 4.3**

*Difference-in-difference Results for California State-level Title IX Policy in Two Control Groups, Average Treatment Effect on the Treated (1 & 2); and Year-specific Treatment Effect (3 & 4)*

	WICHE (1)	Never-Adopt (2)	WICHE (3)	Never-Adopt (4)
Average State-level Title IX Policy Effect	12.333 (5.675)	6.880 (5.425)		
State-level Title IX Policy Effect on total incident reports by year				
2011			4.731 (3.879)	4.252 (3.524)
2012			5.184 (3.312)	3.610 (2.774)
2013			5.278** (2.277)	4.124 (1.936)
2014			12.242*** (1.541)	7.740*** (1.083)
2015			15.029*** (0.443)	11.361*** (0.446)
2016			17.248*** (1.340)	12.621*** (1.629)
2017			13.487** (4.415)	6.360 (4.508)
2018			21.710*** (3.337)	11.520** (3.800)
2019			21.553*** (5.326)	12.109 (5.701)
State appropriations, in millions	-0.654 (0.296)	-0.220** (0.087)	-0.648 (0.296)	-0.197** (0.085)
State grant funding, in millions	0.793** (0.322)	0.318 (0.150)	0.790** (0.319)	0.316 (0.149)
Total Enrollment	0.001 (0.0004)	0.001 (0.001)	0.001 (0.0004)	0.001 (0.001)
Governance Structure				
None	--	--	--	--
Coordinating Board	0.146 (7.328)	15.230 (13.500)	1.203 (7.213)	15.230 (13.479)
Governing Board	-3.863 (4.754)	-6.142 (8.960)	-4.023 (4.799)	-6.233 (9.086)
Governing & Coordinating	-1.139 (4.577)	8.743 (10.314)	0.089 (4.287)	8.712 (10.254)
Advisory Board (Ohio only)				
Constant	141.436** (53.915)	-31.285 (25.355)	-20.003 (12.018)	-30.909 (25.172)
Institutions	1350	3449	1350	3449
R-squared	0.5543	0.2486	0.5574	0.2489
State Fixed-Effects	YES	YES	YES	YES
Year Fixed-Effects	YES	YES	YES	YES

Standard errors displayed in parenthesis. \*\*\*p <0.01, \*\*p<0.05

**Table 4.4**

*Placebo Testing for California, WICHE Control Group with Average Treatment Effect on the Treated (1 & 2) Model; and Year-specific Treatment Effect (3 & 4) Model*

	WICHE (2012)	WICHE (2013)	WICHE (2012)	WICHE (2013)
Average State-level Title IX Policy Effect	11.317*** (2.422)	11.665*** (3.321)		
State-level Title IX Policy Effect on total incident reports by year				
2011			--	--
2012			--	--
2013			0.116 (1.030)	--
2014			7.085*** (1.790)	-9.457 (6.768)
2015			9.893** (3.082)	-6.641 (5.477)
2016			12.138** (4.544)	-4.389 (4.017)
2017			8.446 (7.663)	-8.057*** (0.941)
2018			16.617** (6.543)	-0.095** (2.035)
2019			16.507 (8.560)	--
State appropriations, in millions	-0.632** (0.278)	-0.645 (0.288)	-0.647 (0.295)	-0.649 (0.296)
State grant funding, in millions	0.786** (0.312)	0.793** (0.316)	0.787** (0.317)	0.788** (0.317)
Total Enrollment	0.001 (0.0004)	0.001 (0.0004)	0.001 (0.0004)	0.001 (0.001)
Governance Structure				
None	--	--	--	--
Coordinating Board	-0.503 (6.139)	-0.254 (6.566)	0.878 (7.460)	0.745 (7.514)
Governing Board	-4.459 (4.284)	-4.235 (4.438)	-3.843 (4.754)	-3.782 (4.758)
Governing & Coordinating	-0.122 (4.302)	-0.449 (4.500)	-0.394 (4.593)	-0.588 (4.631)
Advisory Board (Ohio only)	--	--	--	--
Constant	137.909** (50.370)	-21.047 (12.089)	141.219** (53.711)	141.314** (53.825)
Institutions	1350	1350	1350	1350
R-squared	0.5525	0.5536	0.5570	0.5568
State Fixed-Effects	YES	YES	YES	YES
Year Fixed-Effects	YES	YES	YES	YES

Standard errors displayed in parenthesis. \*\*\*p <0.01, \*\*p<0.05

**Table 4.5**

*Placebo Testing for California, Never-adopt Control Group with Average Treatment Effect on the Treated (1 & 2) Model; and Year-specific Treatment Effect (3 & 4) Model*

	Never-Adopt (2012)	Never-Adopt (2013)	Never-Adopt (2012)	Never-Adopt (2013)
Average State-level Title IX Policy Effect	6.533** (2.329)	6.778** (3.383)		
State-level Title IX Policy Effect on total incident reports by year				
2011			--	--
2012			--	--
2013			0.519 (0.837)	--
2014			4.136** (1.734)	3.617*** (0.912)
2015			7.761** (2.999)	7.242*** (2.172)
2016			9.025 (4.329)	8.507** (3.501)
2017			2.779 (7.254)	2.264 (6.420)
2018			7.928 (6.504)	7.410 (5.680)
2019			8.527 (8.434)	8.012 (7.603)
State appropriations, in millions	-0.197 (0.089)	-0.199 (0.088)	-0.198** (0.86)	-0.198** (0.086)
State grant funding, in millions	0.317 (0.151)	0.318 (0.151)	0.316 (0.149)	0.317 (0.149)
Total Enrollment	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Governance Structure				
None	--	--	--	--
Coordinating Board	15.165 (13.566)	15.193 (13.540)	15.236 (13.478)	15.236 (13.478)
Governing Board	-6.367 (8.793)	-6.262 (8.854)	-6.189 (9.065)	-6.182 (9.062)
Governing & Coordinating	8.588 (10.468)	8.656 (10.405)	8.733 (10.255)	8.736 (10.256)
Advisory Board (Ohio only)	--	--	--	--
Constant	-31.103 (25.378)	-31.155 (25.384)	-31.111 (25.317)	-31.158 (25.349)
Institutions	3449	3449	3449	3449
R-squared	0.2486	0.2486	0.2488	0.2488
State Fixed-Effects	YES	YES	YES	YES
Year Fixed-Effects	YES	YES	YES	YES

Standard errors displayed in parenthesis. \*\*\*p <0.01, \*\*p<0.05

## **California, Average Treatment Effect**

California's Assembly Bill 1433 requires public institutions within California with 1,000+ full-time equivalent (FTE) students to report and manage incidents of sexual misconduct in a prescriptive way, or risk forfeiture of state grant monies (Student Safety, 2014). The legislation passed in 2014, with the policy intervention taking effect in 2015. I analyzed California's reporting within its regional compact of states, WICHE, and a national set of states that never adopted a state-level Title IX policy, hereinafter referred to as never-adopters. Three of the sixteen WICHE member states adopted a state-level Title IX policy (Colorado in 2016, Oregon and Washington in 2015), but none with the strength and specificity of California's AB 1433. Functionally, these pieces of legislation require institutions to report sexual misconduct. Still, none explicitly describe consequences for institutions that do not comply (i.e., risk of state funding forfeiture). Since this study examines a state-level Title IX accountability policy with consequences (positive or negative), Colorado, Oregon and Washington are considered not to have adopted similar state-level Title IX policies within the WICHE control group. These states are not included in the never-adopter group since some sort of policy is in effect.

After implementing the California Assembly Bill 1433, no policy effect was detected on sexual misconduct incident reports when controlling for state appropriations, grant dollars, total enrollment, governance structure, and regional compact with state- and year-fixed effects (see Table 4.3, Figure 4.2). This analysis did not result in statistically significant relationships between the outcome and control variables that withstood placebo testing. Examining the average policy effect within the never-adopters control group again revealed no policy effect when controlling for state appropriations, state grant dollars, total enrollment, governance structure, and a national set of never-adopters with state- and year-fixed effects (Table 4.3,

Figure 4.4). The only statistically significant result within this analysis was between total incident reports and state appropriations dollars ( $\beta = -0.220, p < 0.05$ ). When examining California AB 1433 within two control groups, controlling for several variables, there is no policy effect on sexual misconduct incident reporting at four-year public institutions.

Utilizing multiple control groups to examine California's state-level Title IX policy effect contributes to robustness in this study. Additionally, I conducted four placebo tests: two placebo years for the regional compact control group and two for the nationwide never-adopters control group. The placebo tests were conducted to determine if any exogenous factors may drive a change in total misconduct incident reporting. Two years between 2010 and 2014 were selected at random to see if the dependent variable changed across these artificial thresholds. The results of these tests can be viewed in Table 4.4 and Table 4.5. Placebo testing confirmed no policy effect, and the statistically significant relationship between state appropriations and total incident reports when the California policy is examined within the never-adopter context. For example, state appropriations showed a statistically significant relationship in the initial analysis ( $\beta = -0.220, p < 0.05$ ) and the placebo testing did not return significantly significant results. This means the placebo testing confirms a meaningful relationship between total incident reports and state appropriations when examining the California state-level Title IX policy when compared to states that never adopted such a policy. I also conducted a Granger causality test for each control group, which confirmed anticipation of the treatment or the implementation of Assembly Bill 1433 (Lopez & Weber, 2017). The increase of sexual misconduct incident reporting in California public four-year institutions cannot be attributed to AB 1433, despite controlling for variables guided by policy and theory.

## California, Year-to-Year Effects

In the next iteration of examining sexual misconduct incident reporting in California, I looked at the effect of the policy intervention on total reports year-by-year. Once again, the statistical analysis controlled for state appropriations dollars, state grant monies, total enrollment of FTE students, governance structure, and a geographical grouping of states. The first model examined the policy effect within states belonging to WICHE ( $n = 15$ ), and the second model with a national set of never-adopting states ( $n = 32$ ). When examining California AB 1433 within the WICHE compact context, sexual misconduct incident reports increased over time, with a sharp increase from 2013 to 2014 followed by less sharply increasing reporting rates in post-policy years (see Table 4.3, column 3). Similar to the average treatment analysis, no policy effects were present that withstood placebo testing. California's sharp increase in reporting prior to the enactment of AB 1433 (2015) signals other exogenous changes may be affecting sexual misconduct reporting in its four-year public institutions. Figure 4.2 visually displays the reporting trends in California in the context of WICHE states.

The reporting trend is depicted once again to highlight the treatment effect of California's state-level Title IX policy, showing the marginal treatment effect (see Figure 4.3). Marginal effects allow for the understanding of how the outcome variable (total incident reports) changes given a change in an independent variable (time) holding all other independent variables constant (state appropriations, state grant funding, total enrollment, governance structure) (Titus, 2021). The marginal effects are based on estimates produced by the time-varying DID model. The statistical analysis reveals with 95% confidence that California's incident reporting from 2013 to 2019 are statistically different from zero, and distinct from incident reporting in WICHE states. This corresponds to the white space in the figure, between the red and blue shaded area. The

intersection of the red and blue confidence intervals between 2010 and 2013 serves as an example where conclusions cannot be made with 95% confidence that reporting levels are distinct or different. California's margin of error (i.e., no policy effect) is larger than that for WICHE states ( $n = 14$ ).

When examined in the national set of never-adopters, the policy effect was statistically significant in several post-implementation years (see Table 4.3, column 4). State appropriations ( $\beta = -\$0.197 \text{ M}$ ,  $p < 0.05$ ) was the only control variable with a statistically significant relationship to total incident reports. When examined year-to-year, total sexual misconduct reports sharply increased prior to the policy intervention, then experienced continued increases at slower rates in post-intervention years. Figure 4.4 visually represents the reporting patterns between the two groups, yet the difference between the two groups grows slightly larger after the policy implementation. Similar to the WICHE control group, Figure 4.5 depicts the marginal effects of the regression analysis of California total incident reports and the never-adopter control group. The analysis reveals with 95% confidence that California's incident reporting from 2013 to 2016, and 2018 are statistically different from zero, and distinct from incident reporting in never-adopter states. Again, California's marginal effects are much larger than that of the never-adopter control group ( $n = 31$ ), indicating that an exogenous variable may affect total incident reporting.

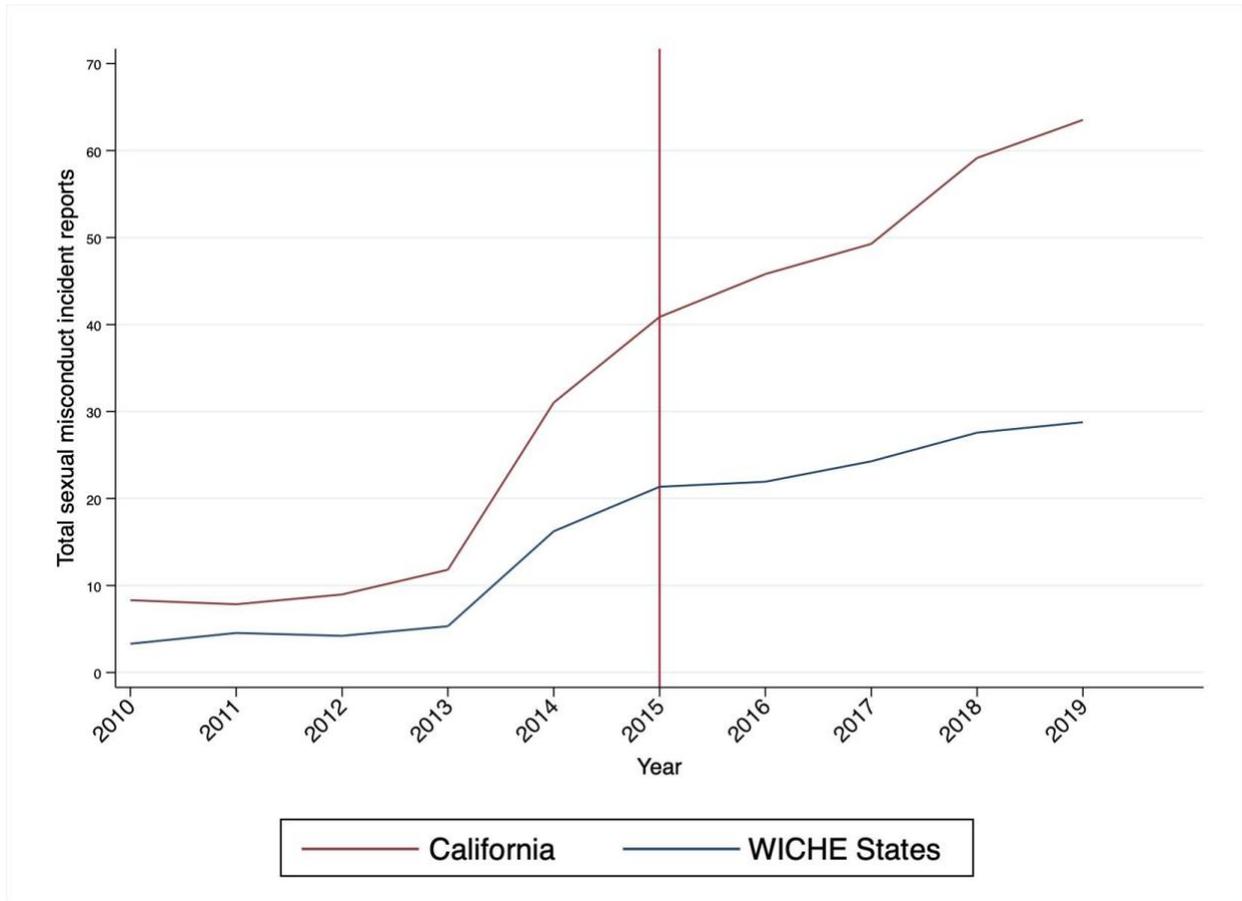
After testing the California policy in both control groups, placebo tests nullify any previously detected policy effects except for 2017 ( $\beta = 11.520$ ,  $p < 0.05$ ) (see Table 4.4 and Table 4.5). The placebo tests for both 2012 and 2013 did not reveal any statistical significance for the policy intervention in the 2017 reporting year, indicating California's AB 1433 has some effect on sexual misconduct incident reporting at four-year public institutions in 2017 when

examined within the context of never-adopters. Yet, when considering the marginal effects of the DID model as displayed in Figure 4.5, the policy effect in 2017 is disconfirmed. Placebo testing also confirmed there are no statistically significant relationships between the outcome and control variables when examined within the context of national never-adopters.

In summary, when examined within the context of academic compact states, the California state-level Title IX policy has no effect on sexual misconduct incident reporting in four-year public institutions in the state. When the policy is examined in the context of a set of national never-adopters, the state-level Title IX policy affects sexual misconduct incident reporting for one year, 2017. Taken together, there is no meaningful policy effect of AB 1433 on sexual misconduct incident reporting at four-year public institutions in California.

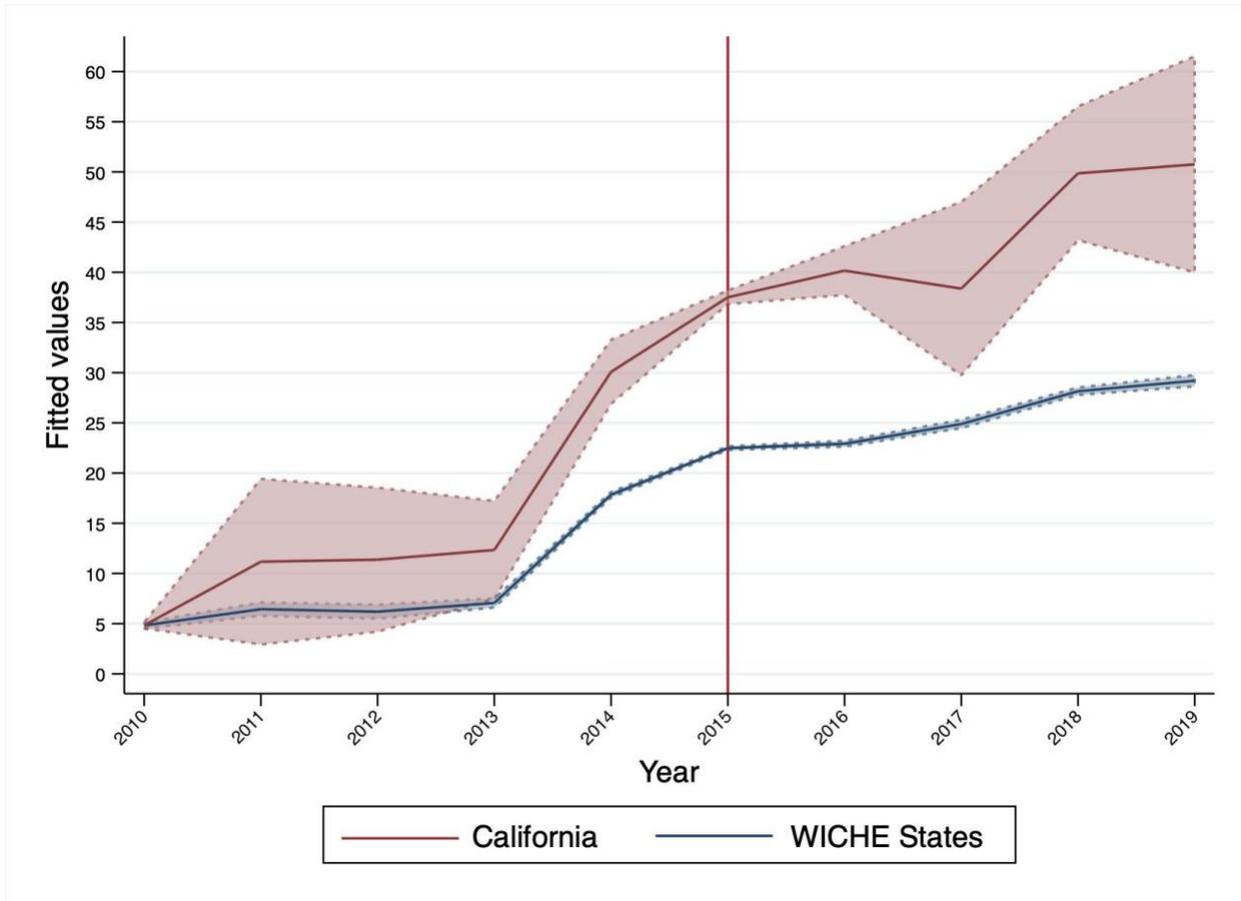
**Figure 4.2**

*California DID Random-effects Model, State and Year Fixed Effects, WICHE Control Group*



**Figure 4.3**

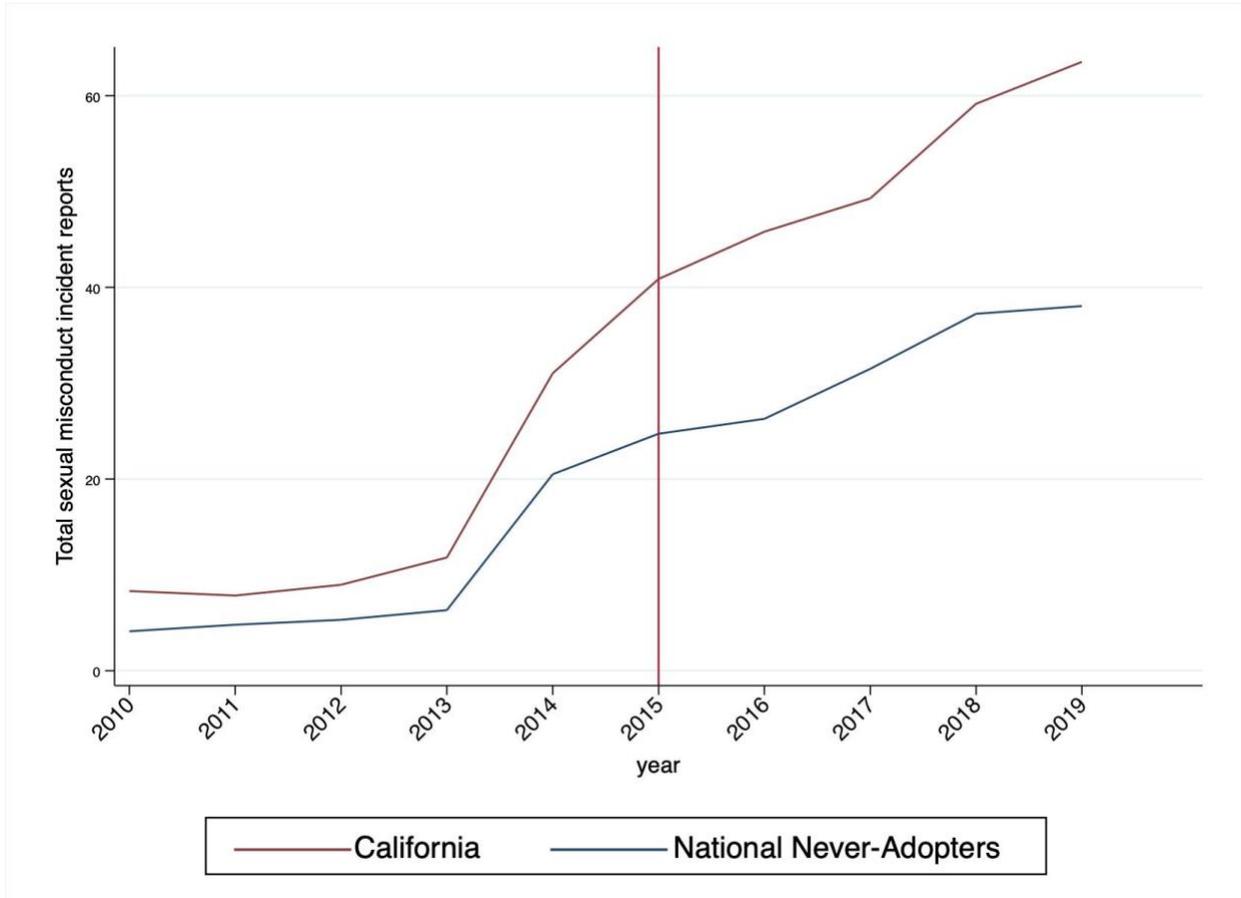
*Predictive Margins of Treatment Effects with 95% Confidence Intervals, California DID  
Random-effects Model with Driscoll-Kraay Standard Errors, State and Year Fixed-effects,  
WICHE Control Group*



**Figure 4.4**

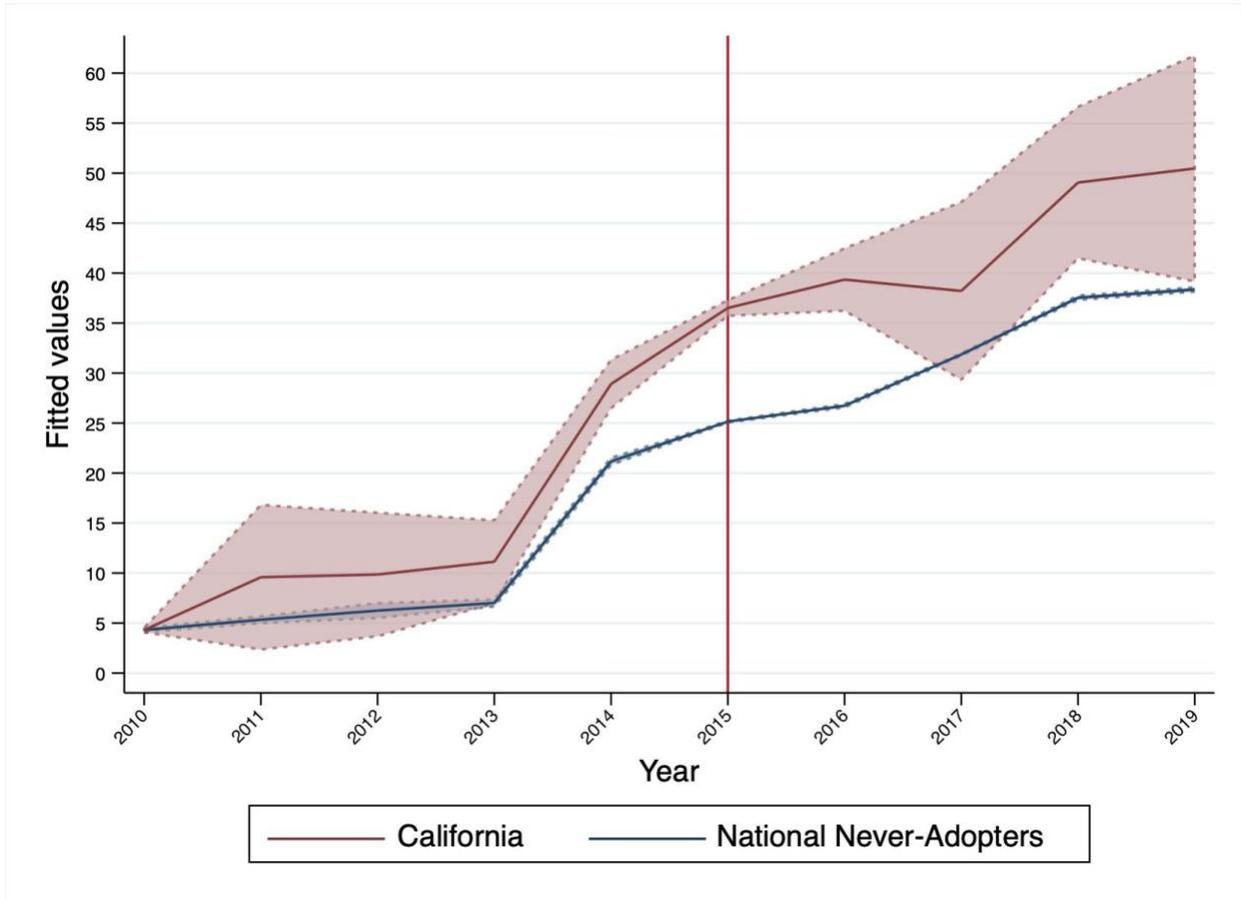
*California DID Random-effects Model, State and Year Fixed Effects, Never-adopt Control*

*Group*



**Figure 4.5**

*Predictive Margins of Treatment Effects with 95% Confidence Intervals, California DID  
Random-effects Model with Driscoll-Kraay Standard Errors, State and Year Fixed-effects,  
Never-adopt Control Group*



## **Difference-in-Differences Analysis for New York Amendment 129-B**

New York’s Education Law Article 129-B requires any college or university chartered by the Board of Regents or state constitution to record incidents of sexual misconduct annually and file for a certificate of compliance or risk forfeiture of “state aid” (An Act to Amend the Education Law, in Relation to the Implementation by Colleges and Universities of Sexual Assault, Dating Violence, Domestic Violence and Stalking Prevention and Response Policies and Procedures; and to Amend the Civil Practice Law and Rules, in Relation to Privacy of Name in Certain Legal Challenges to College/University Disciplinary Findings; and Making Appropriations Therefor, 2015). The legislation passed in 2015, with the policy intervention taking effect mere months after. Like California’s analysis, New York was compared to neighboring states, as well as a national set of never-adopters. Five of the 14 neighboring states adopted a state-level Title IX policy (Delaware in 1993, Connecticut in 2012, Maryland and New Jersey in 2013, and Pennsylvania in 2016). These states’ policies did not directly correlate compliance with forfeiture of state financial support to higher education institutions. For this reason, these states are not considered treated with the policy within the neighbor control group and not included in the never-adopter group since there is a weaker or dissimilar state-level Title IX policy in effect.

Following the same procedure as the California analysis, a series of DID estimates were conducted to examine the effect, if any of the state-level Title IX policy on sexual misconduct incident reporting in four-year public institutions within New York. These models include a dichotomous variable for New York four-year public institutions, and any post-policy year. The interaction of the state-level policy and post-intervention period (e.g., *nystix\*post*) is used to identify the policy effect. The first model examines the average policy effect over time,

examined within the context of neighboring states and a national set of never-adopters (see Table 4.6, columns 1 and 2). The second model examines how the policy effect differs from year-to-year (see Table 4.6, columns 3 and 4).

**Table 4.6**

*Difference-in-difference Results for New York State-level Title IX Policy in Two Control Groups, Average Effect of Treatment on the Treated (ATET, 1 & 2); Year-specific Treatment Effect (3 & 4)*

	Neighbors (1)	Never-Adopt (2)	Neighbors (3)	Never-Adopt (4)
Average State-level Title IX Policy Effect	-11.163** (4.510)	-5.027** (2.073)		
State-level Title IX Policy Effect on total incident reports by year				
2011			0.099 (0.061)	-0.107 (0.051)
2012			0.486 (0.359)	-0.087 (0.110)
2013			-1.528*** (0.061)	-1.480*** (0.140)
2014			-5.591*** (0.104)	-4.454*** (0.187)
2015			-8.323*** (0.682)	-4.650*** (0.785)
2016			-5.397*** (0.069)	-2.843*** (0.354)
2017			-6.200*** (0.468)	-4.822 (0.531)
2018			-23.115*** (1.283)	-8.927*** (0.934)
2019			-19.342*** (0.814)	-10.031*** (0.362)
State appropriations, in millions	-0.002 (0.037)	-0.203 (0.091)	-0.003 (0.037)	-0.202** (0.091)
State grant funding, in millions	0.173 (0.109)	0.318 (0.156)	0.174 (0.109)	0.317 (0.156)
Total Enrollment	0.001 (0.001)	0.001 (0.0006)	0.001 (0.001)	0.001 (0.001)
Governance Structure				
None	--	--	--	--
Coordinating Board	5.673 (7.882)	11.534 (9.666)	5.634 (7.867)	11.531 (9.664)
Governing Board	10.403 (23.788)	-5.678 (9.333)	10.443 (23.839)	-5.686 (9.334)
Governing & Coordinating	-19.910 (15.408)	2.862 (4.416)	-19.945 (15.443)	2.857 (4.413)
Advisory Board (Ohio)	-33.591 (15.745)	--	8.535 (6.623)	20.350 (20.929)
Constant	16.791** (5.769)	-26.335 (21.395)	-25.682 (17.000)	-26.481 (21.201)
Institutions	1774	3549	1774	3549
R-squared	0.2109	0.2334	0.2120	0.2336
State Fixed-Effects	YES	YES	YES	YES
Year Fixed-Effects	YES	YES	YES	YES

Standard errors displayed in parenthesis. \*\*\*p <0.01, \*\*p<0.05

**Table 4.7**

*Placebo Testing for New York, Neighbors Control Group with Average Treatment Effect on the Treated (1 & 2) Model; and Year-Specific Treatment Effect (3 & 4) Model*

	Neighbors (2012)	Neighbors (2013)	Neighbors (2012)	Neighbors (2013)
Average State-level Title IX Policy Effect	-8.674 (3.919)	-10.119** (3.966)		
State-level Title IX Policy Effect on total incident reports by year				
2011			--	--
2012			--	--
2013			-2.014*** (0.328)	--
2014			-6.077*** (0.276)	-4.063*** (0.054)
2015			-8.809*** (1.039)	-6.794*** (0.722)
2016			-5.883*** (0.423)	-3.869*** (0.105)
2017			-6.685*** (0.826)	-4.671*** (0.503)
2018			-23.601*** (1.640)	-21.587*** (1.313)
2019			-19.828*** (1.169)	-17.814*** (0.842)
State appropriations, in millions	-0.001 (0.036)	-0.002 (0.037)	-0.003 (0.037)	-0.003 (0.037)
State grant funding, in millions	0.172 (0.109)	0.172 (0.109)	0.174 (0.109)	0.174 (0.109)
Total Enrollment	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Governance Structure				
None	--	--	--	--
Coordinating Board	5.712 (7.866)	5.693 (7.876)	5.633 (7.869)	5.632 (7.869)
Governing Board	10.247 (23.752)	10.311 (23.777)	10.443 (23.839)	10.441 (23.838)
Governing & Coordinating	-19.847 (15.386)	-19.875 (15.394)	-19.945 (15.443)	-19.946 (15.443)
Advisory Board (Ohio only)	--	--	--	--
Constant	16.403** (6.029)	-25.817 (16.752)	-25.694 (16.992)	-25.730 (17.020)
Institutions	1774	1774	1774	1774
R-squared	0.2102	0.2106	0.2120	0.2120
State Fixed-Effects	YES	YES	YES	YES
Year Fixed-Effects	YES	YES	YES	YES

Standard errors displayed in parenthesis. \*\*\*p < 0.01, \*\*p < 0.05

**Table 4.8**

*Placebo Testing for New York, Never-adopt Control Group with Average Treatment Effect on the Treated (1 & 2) Model; and Year-specific Treatment Effect (3 & 4) Model*

	Never-Adopt (2012)	Never-Adopt (2013)	Never-Adopt (2012)	Never-Adopt (2013)
Average State-level Title IX Policy Effect	-4.608** (1.847)	-1-5.251** (1.744)		
State-level Title IX Policy Effect on total incident reports by year				
2011			--	--
2012			--	--
2013			-1.394*** (0.217)	--
2014			-4.367*** (0.285)	0.196 (0.599)
2015			-4.564*** (0.878)	--
2016			-2.756*** (0.451)	1.807*** (0.433)
2017			-4.735*** (0.624)	-0.172 (0.255)
2018			-8.840*** (1.036)	-4.277*** (0.185)
2019			-9.945*** (0.461)	-5.381*** (0.427)
State appropriations, in millions	-0.203 (0.091)	-0.203 (0.091)	-0.203 (0.091)	-0.203 (0.091)
State grant funding, in millions	0.318 (0.156)	0.318 (0.156)	0.317 (0.156)	0.317 (0.156)
Total Enrollment	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Governance Structure				
None	--	--	--	--
Coordinating Board	11.537 (9.665)	11.534 (9.666)	11.531 (9.664)	11.531 (9.665)
Governing Board	-5.654 (9.328)	-5.672 (9.328)	-5.685 (9.334)	-5.684 (9.334)
Governing & Coordinating	2.881 (4.414)	2.870 (4.418)	2.857 (4.413)	2.857 (4.414)
Advisory Board (Ohio only)	--	20.352 (20.929)	--	--
Constant	-26.476 (21.111)	-26.474 (21.145)	-26.475 (21.203)	-26.474 (21.207)
Institutions	3549	3549	3549	3549
R-squared	0.2333	0.2334	0.2336	0.2336
State Fixed-Effects	YES	YES	YES	YES
Year Fixed-Effects	YES	YES	YES	YES

Standard errors displayed in parenthesis. \*\*\*p <0.01, \*\*p<0.05

## **New York, Average Treatment Effect**

New York's Amendment 129-B requires institutions of higher education, regardless of governance structure or level of control (i.e., public versus private), to report sexual misconduct incident reports annually. After the legislation was implemented, sexual misconduct incident reports decreased by 11.163 ( $p < 0.05$ ) reports on average when controlling for state appropriations, grant dollars, total enrollment, year, governance structure, and neighboring states (see Table 4.6, column 1). The outcome variable did not have any significant relationships with any control variable when examining the policy effect within the context of neighboring states. Figure 4.6 visually displays the reporting trends in New York in the context of neighboring states. The reporting trend sharply increased from 2013 to 2014 and increased at a decreasing rate before declining in 2018. Prior to placebo testing, it appears that the presence of New York's Amendment 129-B led to reduced incidents of sexual misconduct on public four-year college campuses when controlling for several factors including region.

Examined within the context of national never-adopters, total incident reports decreased by 5.027 reports ( $p < 0.05$ ) when controlling for state appropriations, grant dollars, total enrollment, governance structure with state- and year-fixed effects (see Table 4.6, column 2). This analysis did not result in statistically significant relationships between the outcome and control variables. Figure 4.8 demonstrates difference-in-differences analysis visually showing the reporting patterns between the two groups. It appears as if the difference between New York and never-adopters grows larger after the policy implementation, and markedly so after 2017.

Placebo tests were again conducted to help determine if any exogenous aspects may drive a change in total misconduct incident reporting for public four-year institutions in the state of New York. Two years between 2010 and 2014 were selected randomly to see if the policy effect

changed across these artificial thresholds. The results of these tests can be viewed in Table 4.7 and Table 4.8. When controlling for neighboring states and never-adopters, the placebo tests returned statistically significant results indicating that other factors are driving sexual misconduct incident reporting. Ultimately, New York Amendment 129-B did not have a real effect on sexual misconduct incident reporting at four-year public institutions within the state. In this average treatment effect model, it does not appear that there is a definitive causal relationship between the New York state-level policy and sexual misconduct incident reporting when controlling for state appropriations grant dollars, total enrollment, governance structure, and geographic region.

### **New York, Year-to-Year Effects**

In the final iteration of examining sexual misconduct incident reporting in New York, I explored the effect of Amendment 129-B on sexual misconduct incident reporting year-by-year. It is reasonable to assume that institutions would better understand the legislation, thus reporting and compliance requirements as time passes. This may allow for increased reporting of sexual misconduct incident reports on campus and produce higher overall reporting frequencies at the state level. This set of models follows the same protocols and general equation of the average treatment effect DID models, with the addition of examining the policy effect on a per-year basis instead of grouping all years together (see Table 4.6, column 3 and 4). This analysis also controlled for state appropriations, state grant funding, total enrollment of FTE students, governance structure, and geographical grouping of states.

When examining the New York Amendment 129-B within the neighboring states control group, sexual misconduct reports in New York four-year public institutions were lower than in neighboring states and increased at a decreasing rate over time until experiencing a sharp decline

in 2018. Like the California-WICHE analysis, the treatment effect was statistically significant in select years with a sharp increase in reporting in 2013 ( $\beta = -1.528, p < 0.01$ ) and increased less rapidly after the policy implementation period (2015) before reporting declines in 2018 (see Table 4.6, column 3). Figure 4.6 graphically depicts the results of this statistical analysis. The marginal effects of the DID analysis is depicted once again to highlight the treatment effect of New York's state-level Title IX policy, showing the change in total incident reporting over time (see Figure 4.7). The statistical analysis reveals with 95% confidence that New York's incident reporting from 2010 through 2019 is not statistically different from zero, and not distinct from incident reporting in neighboring states. The intersection of the red and blue confidence intervals occurs in all years in the sample timeframe, confirming that conclusions cannot be made with 95% confidence that reporting levels are distinct or different. This concept is further investigated with placebo testing.

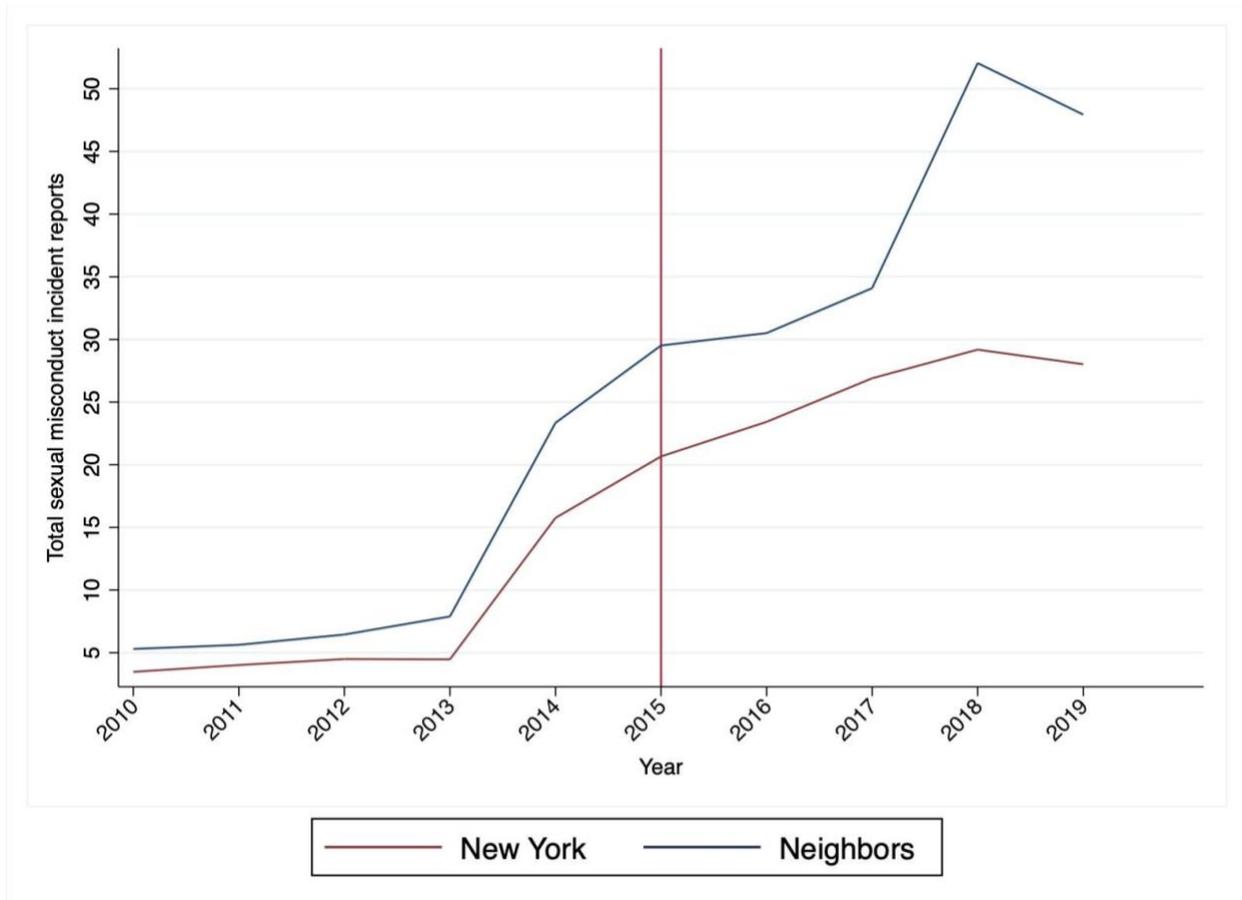
When examined in the context of a national set of never-adopters, the policy effect was statistically significantly related to total sexual misconduct incident reports in the years immediately before the policy implementation (2013, 2014) and all post-implementation years (see Table 4.6, column 4). In this model, state appropriations ( $\beta = -\$0.202M, p < 0.05$ ) was negatively related to total incident reports. Like the neighbor control group, Figure 4.9 depicts the marginal effects of the regression analysis of New York total incident reports and the never-adopter control group. The statistical analysis reveals with 95% confidence that New York's incident reporting between prior to policy implementation and from 2010 to 2019 are not statistically different from zero and are not distinct from incident reporting in never-adopter states. The intersection of the red and blue confidence intervals occurs in all years in the sample

timeframe, confirming that conclusions cannot be made with 95% confidence that reporting levels are distinct or different. This concept is further investigated with placebo testing.

Placebo tests were conducted to determine if exogenous factors not included in the models, not the policy intervention, drive a change in total misconduct incident reporting. Two years between 2010 and 2014 were selected randomly to serve as false intervention years to see how total incident reporting changed across these artificial thresholds. The tests indicate that the New York Amendment 129-B does not explain total sexual misconduct incident reports over time in New York's public four-year institutions. When testing the average treatment effect models, placebo testing produced mixed results in the neighboring states control group: the 2012 placebo year confirmed a policy effect, and the 2013 placebo year nullified a statistically significant policy effect. All placebo testing in the time-varying models nullified policy effects in both control groups. The marginal effects graphs confirm there is no policy effect, as the confidence intervals for the treatment and control groups overlap for all years in the sample. The placebo test results indicate total incident reporting may not necessarily change due to the policy presence, while controlling for several variables and region (see Table 4.7 and Table 4.8). Finally, I conducted a Granger causality test for each control group, which confirmed anticipation of the treatment or the implementation of Amendment 129-B (Lopez & Weber, 2017). The increase of sexual misconduct incident reporting in New York public four-year institutions cannot be attributed to Amendment 129-B, despite controlling for variables guided by policy and theory.

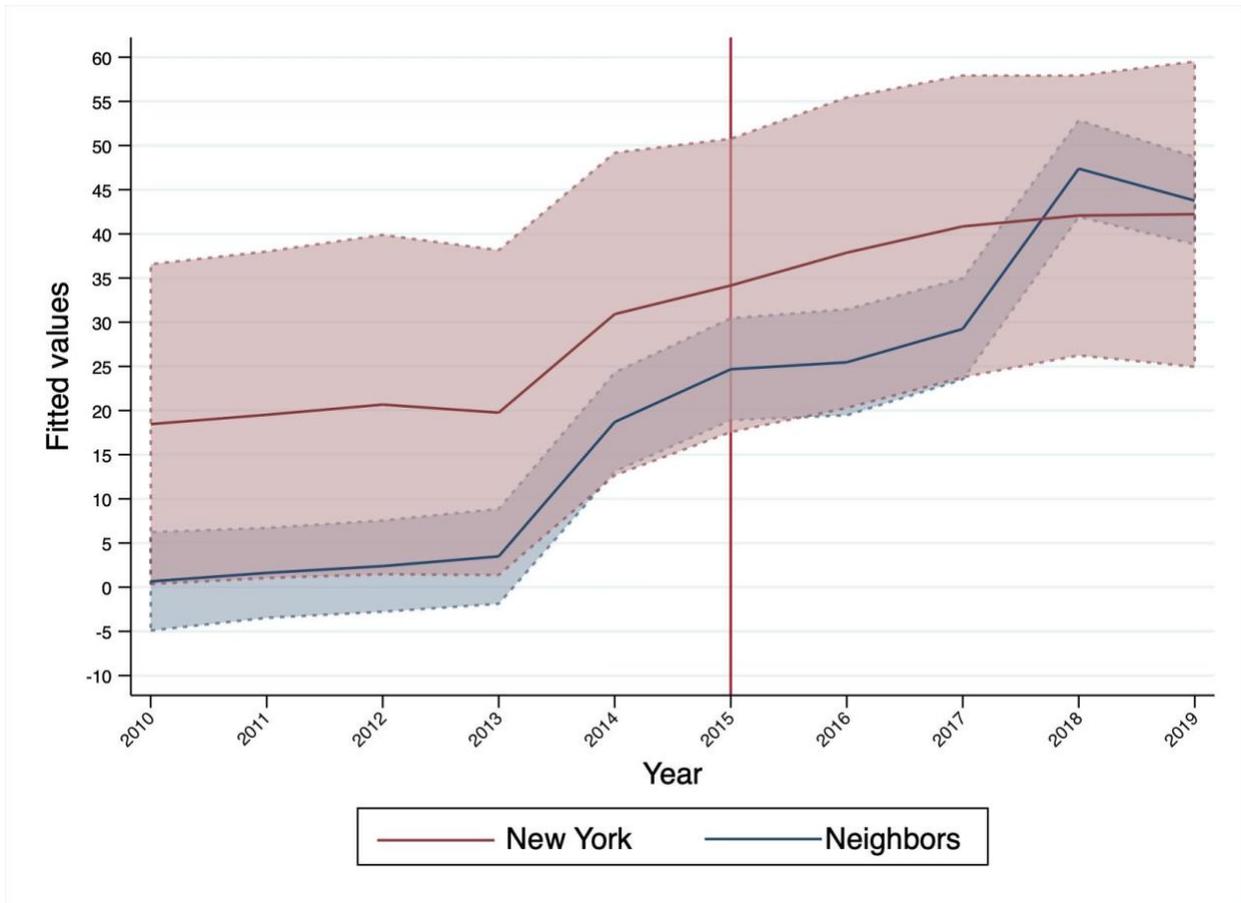
**Figure 4.6**

*New York DID Random-effects Model, State and Year Fixed Effects, Neighbor Control Group*



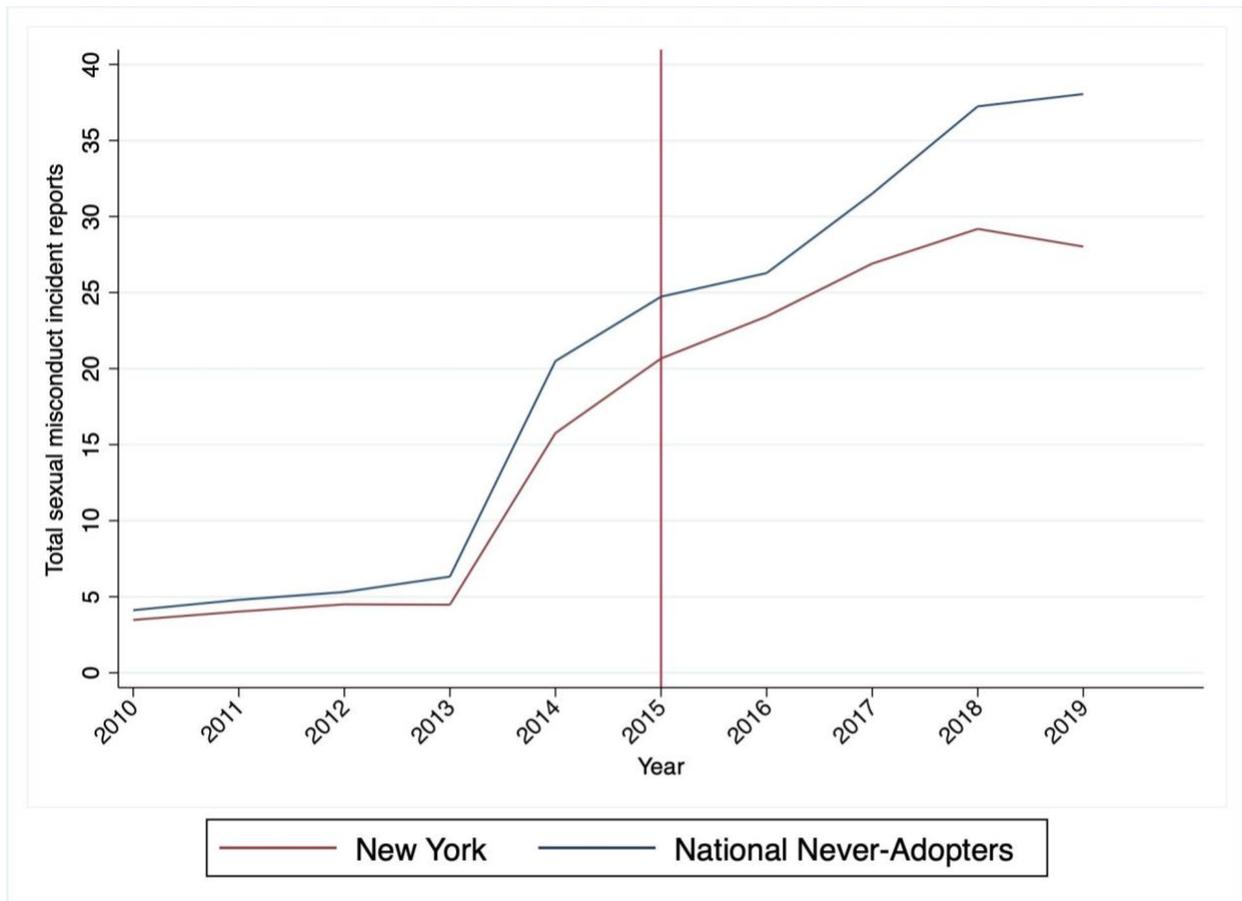
**Figure 4.7**

*Predictive Margins of Treatment Effects with 95% Confidence Intervals, New York DID  
Random-effects Model with Driscoll-Kraay Standard Errors, State and Year Fixed-effects,  
Neighbors Control Group*



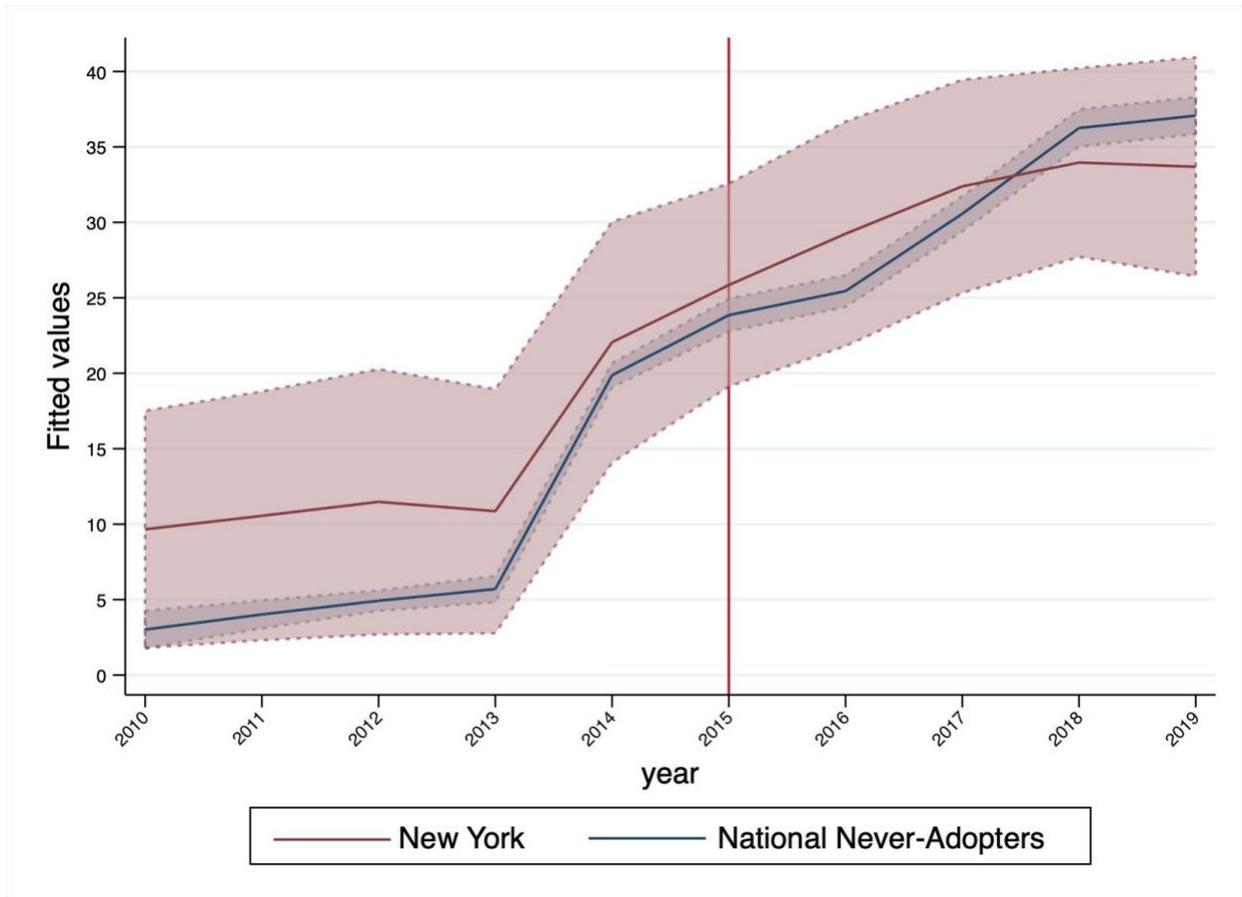
**Figure 4.8**

*New York DID Random-effects Model, State and Year Fixed Effects, Never-adopt Control Group*



**Figure 4.9**

*Predictive Margins of Treatment Effects with 95% Confidence Intervals, New York DID  
Random-effects Model with Driscoll-Kraay Standard Errors, State and Year Fixed-effects,  
Never-adopt Control Group*



## Summary of Robustness Checks

The results for each state's difference-in-differences model reflects the effect of a state-level Title IX policy on institutional reporting of sexual misconduct. Each of the eight primary models were tested for heteroskedasticity, serial correlation, and cross-sectional dependence. Breusch-Pagan tests (*hettest*) were conducted to examine the variability of total sexual misconduct incident reports. Serial correlation was tested using the *xtserial* command in the statistical computing software, Stata. Finally, Pesaran tests (*xtcd*) were conducted to detect cross-sectional dependence. Heteroskedasticity, serial correlation, and cross-sectional dependence were present in all models, thus Driscoll-Kraay standard errors were reported for these analyses. Driscoll-Kraay standard errors are more conservative than an unadjusted standard error or robust standard errors. The difference-in-differences models were also tested for linear trends. Visual representations of these tests can be found in Appendix A.

In addition to testing for OLS assumptions, placebo testing was employed to determine the effect of state-level Title IX policies on total incident reports. The analyses suggest the implementation did not have significant effects on reporting trends, as confirmed by placebo tests for each treatment state's multiple control groups. In the constant policy effects models, placebo tests returned statistically significant results for the dependent variables in constant and time-varying iterations. When California is examined within either context looking at the average treatment effect over the duration of the sample period, the policy effect is not significant; when New York is examined within either context looking at the average treatment effect model, the policy effect is not significant. In the time varying models, the placebo tests, in almost all circumstances confirm there is no policy effect for New York or California. The only statistically significant policy effect is detected in California in 2017 when using the time-

varying DID model. Finally, Granger causality tests detected anticipation of the policy enactment in all models. Taken together, tests reveal caution should be exercised when discussing state-level Title IX's causal effects on sexual misconduct incident reporting in California and New York.

### **Summary of Findings**

No causal effects were detected when analyzing the presence of state-level Title IX policies on total incident reports in California and New York when controlling for several variables and utilizing multiple comparison groups. Although policy effects cannot be detected, sexual misconduct incident reports increased over time in California, and increased more slowly after the policy intervention. Sexual misconduct incident reporting increased over time in New York, then began declining after 2018. New York's reporting rates were lower than states in the neighbor or never-adopter comparison groups for all years. When other states experienced increased reporting rates in 2018, New York's reporting rates declined. Changes in total incident reports over the ten-year sample period should be analyzed within context, as positive and negative conclusions can be drawn from this information for both states. Treatment states' reporting trends are discussed in Chapter Five. In both treatment states and comparison groups, statistical testing revealed policy anticipation immediately before enactment.

The series of models suggest that sexual misconduct incident reports increased over time but cannot be attributed to the creation and implementation of state-level Title IX policies in the two treatment states. In California, the policy implementation had no effect on incident reporting patterns at institutions of higher education within the region or within the national set of never-adopters. In New York, reporting trends increased at a decreasing rate as time passed, especially after policy implementation. Policy effects were larger within the context of neighboring states

than never-adopters, despite lack of statistical significance. Sexual misconduct incident reports increased after the policy implementation in California, while New York institutional reporting increased more slowly before seeing a reporting decline. This study cannot conclusively determine that state-level Title IX policies affect sexual misconduct incident reporting in public four-year institutions in California and New York.

## CHAPTER FIVE DISCUSSION

This chapter begins with a summary of the results organized by the research questions, followed by a discussion of the results within the context of existing research. This chapter highlights the study's contributions to the campus sexual assault and higher education bodies of literature. Lastly, implications for policy, practice, theory, and research are presented. This chapter concludes with recommendations for future research on this topic.

### **Discussion of Findings by Research Question**

*To what extent does the introduction of state-level Title IX legislation (Assembly Bill 1433) affect sexual misconduct incident reporting at four-year public institutions in California?*

The first difference-in-differences model examining the effect of California Assembly Bill 1433 on sexual misconduct incident reports with a constant time trend revealed no policy effect. None of the tests produced statistically significant policy effects, yet the size of the policy effect decreased as comparison groups more closely represented all states. More specifically, when examined within the context of WICHE member states, the policy presence ( $\beta = 12.333, p < 0.1$ ) increased total incident reports on public four-year campuses at a faster rate than the national set of never-adopters ( $\beta = 6.880, p = 0.237$ ). State appropriations ( $\beta = -\$0.220 \text{ M}, p < 0.05$ ) had a significant relationship with total incident reports only when examined within the context of national never-adopters. State grant monies do not significantly correlate with total incident reports within either comparison group. Placebo tests for two randomly chosen pre-policy years also verify that the introduction of state-level Title IX legislation in California has no meaningful effect on sexual assault misconduct incident reporting at four-year public institutions within the state. Although reporting increased in California between 2010 and 2019, the trend cannot be solely attributed to implementing a state-level Title IX policy.

In the second difference-in-differences model examining the same policy with year-specific effects, post-estimation testing revealed anticipation of the policy enactment and short-term impact in sexual misconduct reporting. Institutions within the state anticipated the policy enactment in 2014, with sexual misconduct reporting increasing before the implementation year. The year-specific analysis revealed a sizable jump in reporting in 2014 ( $\beta_{\text{WICHE}} = 12.242$ ;  $\beta_{\text{NEVER}} = 7.740$ ) and 2015, with smaller increases between 2016 and 2019. When examining how the legislation came into existence and its timeline from advocacy to enactment, it is reasonable to connect the rise in reporting before policy enactment to the overall data trend. Media coverage of campus sexual violence in California, followed by constituent advocacy and policy introduction by a state legislator, follows the state's reporting pattern presented in this study. Ultimately, both comparison groups reflected an increase in reporting in the years following the policy intervention, yet placebo tests confirmed reporting trends were not caused by AB 1433 implementation. Sexual misconduct incident reporting within California public institutions does not differ from its regional or national counterparts.

***To what extent does the introduction of state-level Title IX legislation (Amendment 129B) affect sexual misconduct incident reporting at four-year public institutions in New York?***

The difference-in-difference (DID) models examining the effect of Amendment 129-B on sexual misconduct incident reporting indicate that the policy presence did not cause a meaningful difference in reporting at four-year public institutions within New York. Although the time-varying model provided more precision in understanding the reporting pattern before and after the policy implementation, any effects that were discovered during analysis were disconfirmed through placebo testing. Despite a lack of statistical significance, there are important lessons from the analyses. When examined within the context of neighboring states, institutions within

New York reported fewer sexual misconduct incident reports overall. The policy presence ( $\beta = -11.163, p < 0.05$ ) increased total incident reports at a decreasing rate on public four-year campuses faster than when New York's policy was examined within the context of states that never adopted any sort of state-level Title IX policy ( $\beta = -5.027, p < 0.05$ ). The policy's enactment was anticipated, as revealed by the year-to-year model showing a small increase in reporting from 2013 to 2014, followed by a significant jump in reporting frequency in 2014. Once the policy was enacted in 2015, the reporting rate slowed and eventually declined in 2018. When examined within the context of states that never adopted a state-level Title IX policy, the size effect was smaller than neighboring states and mimicked the same general pattern: a sizeable pre-policy jump in reporting followed by a slow increase post-intervention and an eventual decline in sexual misconduct reporting. State appropriations played a role in this time-varying model, with statistically significant, negative relationships to total incident reports ( $\beta = -\$0.202 \text{ M}, p < 0.05$ ). No other control variables had a meaningful relationship with the outcome variable in either model or comparison group. In either iteration of the model, in either comparison group, if sexual misconduct incident reporting serves as a proxy to measure sexual misconduct on college campuses, the decline in reports is promising.

Sexual misconduct incident reporting increased sizeably for both treatment states and all comparison groups from 2013 to 2014, the years immediately preceding state policy implementation. This may have occurred for several reasons: spillover from the 2011 Dear Colleague Letter, either of the presidential awareness campaigns focused on college sexual violence prevention, or institutional adoption of sexual misconduct policies. The year-specific analyses for each treatment state revealed there may be spillover effects from other policy-related efforts prior to the enactment of these two state-level policies. The Dear Colleague letter

provided significant guidance to institutions in how to respond to incidents of sexual violence, how to adjudicate student cases, and timeframes in which institutions must provide complainants resolution. Incident reports may have also increased as a result of the significant awareness campaigns specifically targeted at college campuses: It's On Us and Not Alone. These campaigns focused on students participation in reporting violence they experienced or witnessed, and raising awareness of campus support resources. Finally, increased incident reports prior to the policy implementation may coincide with institutional policy adoption as they explored best practices for sexual violence prevention, education and training, and deepened understanding of compliance from DCL guidance. Recommendations for future research discuss more complex methods to detect any possible policy effects.

### **Study Findings in the Context of Existing Literature**

This study is the first known exploration of state-level Title IX policies on sexual misconduct incident reporting in California and New York, carving a new path in higher education accountability policy research and campus sexual violence research. The findings in this study indicate that state-level Title IX policies do not make a difference in sexual assault incident reporting patterns in four-year public institutions in the two treatment states. Suppose incident reporting serves to measure the presence of sexual violence on college campuses. In that case, a state-level intervention may not be the most effective strategy to reduce sexual violence. This sentiment mimics the federal legislation, evidenced by the enduring presence of sexual violence on college campuses despite the many decades of nationwide legislation aimed to eradicate it. Both levels of policy direct public higher education to address sexual violence or risk face a monetary penalty. The analysis of California Assembly Bill 1433 and New York Amendment 129-B indicate that these state-level laws may operate like the federal mandate: a

policy that acknowledges a problem exists coupled with what seems like an empty threat for higher education institutions to respond to the issue. More importantly, this analysis indicates that public institutions within these states are achieving the policy's intent, yet the policy does not drive compliance. Other factors besides the policy intervention influence sexual misconduct incident reporting.

The policy analysis for California Assembly Bill 1433 reveals the policy innovation and diffusion model (Hearn et al., 2017) may not fully capture the relationship between state-level Title IX legislation and total incident reports. The policy size effect was more prominent in the WICHE comparison group than the national set of never-adopters. The control variables (state appropriations, state grant funding, governance structure) also did not significantly affect the outcome variable. Despite membership in WICHE, it appears states' decision-making around state-level Title IX legislation differs within the group; the size of the policy effect is more prominent in the WICHE comparison group, indicating that states may not look to one another when it comes to sexual assault policy creation and implementation. Some states have a less prescriptive policy enacted (i.e., a state-level policy that does not explicitly connect sexual assault response to state financial support). At the same time, California seems to be the most prescriptive with detailed penalties. The policy effect size was less prominent when examining AB 1433 within the context of states that never adopted any sort of state-level Title IX policy.

Additionally, while it does not seem AB 1433 affects incident reporting in California, further investigation is needed to uncover what has allowed increased reporting within the state over the last decade. Increased reporting over time and growing rates after the policy implementation is a good sign that barriers to reporting may be lower (Halstead et al., 2017; Orchowski et al., 2009). Institutional knowledge of sexual violence on the campus is an entree

into helping students heal from violence, access and receive support services, and address the trauma instead of neglecting to recognize the violence and manage it (Harris et al., 2020; Senn et al., 2018). Increased reporting may indicate decreased barriers to reporting violence, increased access to support services, or even lowered resistance from survivors to engage with an institutional reporting process, well-documented challenges in addressing campus sexual violence (Bergman et al., 2002; Halstead et al., 2017; Orchowski et al., 2009; Spencer et al., 2017; Zinzow & Thompson, 2011). Contrarily, an increase in sexual misconduct incident reporting can signal an increase in sexual misconduct behaviors. Whether attributed to a state-level Title IX policy or not, the increase in sexual misconduct incident reporting in California four-year public institutions of higher education requires additional research to reveal a deeper understanding of this complex issue.

The policy analysis for New York Amendment 129-B demonstrates the principal-agent theory (Kivisto, 2005, 2008; Lane & Kivisto, 2008) at work more clearly than the California case. New York's reporting levels are lower than both comparison groups, neighbors and national never-adopters, and even California's reporting levels. Before placebo testing, the initial analysis within the context of the neighboring states showed a meaningful difference between the reporting of New York institutions versus neighboring states' reporting. This may indicate that four-year public institutions within the state of New York see the state-level Title IX policy as severe enough to elicit compliance. Reporting frequencies indicate institutions should continue to receive state funding and aid for their compliance. If used as a proxy for measuring sexual misconduct behaviors on campuses, the decline in incident reports indicates a decrease in sexual misconduct. On first impression, this is a good sign. It, however, requires further investigation. Similar to the notion of California's increased reporting as a positive signal, New York's

decreased reporting might mean reduced campus violence, increased barriers to reporting sexual violence, unclear or hard to access resources for survivors of sexual violence, or survivor distrust in the institutions when it comes to reporting their experiences with sexual violence. This study is important groundwork for systematically looking at the larger impact of state-level Title IX policies and their effects. It also calls attention to additional research with a deeper, nuanced understanding of what is driving these reporting changes.

The study's findings signal that the conceptual framework of this study may not capture the full relationship between the state decision-makers (or legislation) and the institutions' compliance with campus sexual misconduct policies. The statistical analysis produced no policy effects for either treatment state in any comparison group, evidenced by the lack of statistically significant outcomes and control variables. Alternatively, the principal-agent theory lens may indicate that the incentive or penalty to comply with the state-level policy is not strong or significant enough to drive compliance or affect behavior change. The threat of forfeiting state grant and aid monies does not drive change in public four-year institutions within California or New York; changes that influence sexual misconduct reporting at the institutional level are not driven by the contract (i.e., state-level Title IX policy) laid out by the principal (i.e., state legislature's implementation of the policy). Total incident reports increased over the sample time period, but the increase cannot be attributed to the state-level policy implementation. Further, the policy innovation and diffusion model may be poor fits for examining state-level Title IX policies, in the first iteration. The model provides context as to why states may adopt higher education policies, thus including control variables driven by theory. None of the models demonstrated significant effects on total incident reports, governance structure, state appropriations, state grant funding, or total enrollment. Control variables like governance

structure, state appropriations, and state grant funding can help understand the socioeconomic, politico-institutional, organizational, and policy contexts of the state-level Title IX adoption and implementation. The analysis reveals no relationships between control variables and the outcome variable.

### **Contributions to Literature**

Well-researched topics on campus sexual violence are often found at the individual level focused on the victim's experience, victims' risk factors, health and wellness outcomes, and intervention and educational prevention techniques. Extant literature on state-level higher education accountability policies includes degree production outcomes, higher education finance, student tuition implications, and student financial aid (Heller, 2002; Tandberg & Hillman, 2014; Umbricht et al., 2017). However, despite helpful work on campus sexual violence and higher education policy (e.g., DeLong et al., 2018; Gidycz et al., 2015; Krebs et al., 2007; McMahon et al., 2019; Muehlenhard et al., 2017; Richards, 2019; Spencer et al., 2017; Zinzow & Thompson, 2011), scholars have not explicitly addressed the intersection of these two areas. Until this study, no known empirical research examining campus sexual assault policy at the state level exists in the academic literature. As such, this study adds new knowledge to both research areas by examining a state-level accountability policy using causal statistical techniques to determine its effects on campus sexual violence reporting. This study shifts the sexual violence policy research focus from the federal to the state level.

This research contributes to the campus sexual violence literature by exploring outcomes beyond individual or institutional levels utilizing causal statistical methods. This is the first known study to examine the effect of a state-level law on reporting outcomes, advancing the previous research on the complexity of institutional compliance to federal Title IX (Amar et al.,

2014; DeMatteo et al., 2015; Orchowski et al., 2009; Silbaugh, 2015; Yung, 2015). This study answers DeMatteo and colleagues' (2015) call to create a policy that combines the power and authority of state law, specifically within a higher education environment. Both state laws, California AB 1433 and New York Amendment 129-B, specify action from higher education institutions and direct action to several response strategies with authority from the state to withhold funding. This study examined this policy intervention and its usefulness to higher education institutions and state governments.

Finally, this study utilizes multiple theoretical models and causal methods to understand the effect of a new type of accountability policy. This study leans on the methodological advancements made in higher education policy analysis by utilizing difference-in-differences regression and principal-agent theory in a novel policy arena to understand the effects of a state- or governing system-level policy on institutional outcomes (e.g., see Doyle et al., 2010; Hillman et al., 2015; McLendon et al., 2006; McLendon & Hearn, 2013; Tandberg & Hillman, 2014). Yet, this research advances the methodological approach by incorporating factors that make it likely for states to implement higher education policies (e.g., see Hearn et al., 2017). Difference-in-differences regression is a widely utilized technique in education research when examining policy interventions at the institutional, state, or even national level (Furquim et al., 2020). This study situates the research within the higher education context, examining multiple layers of decision-makers and the communities these decisions affect. Additional research is warranted at the nexus between campus sexual assault and wide-reaching higher education policy to inform the future of this type of legislation and institution-level action.

## Conclusions

This study revealed that implementing a state-level Title IX policy does not affect sexual misconduct incident reporting at four-year public institutions in California and New York. The methodological approach allowed for a detailed examination of the policy - the average treatment of the treated (ATET) and year-specific policy effects - while controlling for several variables guided by the state-level legislation and theory. Whether analyzing the average treatment effect or year-specific effects using placebo testing, state-level Title IX policies do not affect sexual misconduct incident reports. There were no discernable differences in reporting between the treatment states and any comparison groups: WICHE member states, New York neighboring states, or a set of national never-adopting states. This study provides an example of theoretically based, multi-state, large-scale research focused on campus sexual violence beyond individual or institution-level studies centered on local interventions.

This research combines two theories to intricately grasp how state policy affects institutional behavior, moving beyond the simple application of principal-agent theory on its own. Principal-agent theory helps explain the complexity of institutional compliance to state-mandated operations. The principal-agent theory provides a more thorough comprehension of the governance and operation of public higher education; the model helps delineate roles, context, and actions by decision-makers and those tasked to comply. But by itself, the theory would suggest that institutions would behave opportunistically and in their self-interest. Institutions, however, are complex entities that may not act opportunistically even if left unobserved. The inclusion of policy innovation and diffusion theory helps describe the context, making it likely for states to adopt higher education policies, like state-level Title IX mandates, to address a pressing issue affecting campuses. California and New York's large population size, significant

financial investment in public education, Democratic-leaning governors, and centralized higher education governance structures demonstrate the likelihood of this type of policy adoption and implementation.

Finally, despite the analyses revealed no policy effect, this study highlights the increasing sexual misconduct incident reporting trends among treatment and other states. The scope of this research cannot uncover what specifically motivates increased reporting, however, increased reporting is a hopeful sign. Increased reporting alludes to reduced barriers, available support services, and trust in the process of reporting misconduct. Although some of these aspects cannot be studied quantitatively, it remains an area for future research through other methodological pathways.

### **Implications for Policy**

This study revealed no policy effect on sexual misconduct incident reports on college campuses. This finding indicates that the creation and implementation of state-level Title IX policies are more about signaling to stakeholders that legislators comprehend the issue's existence and severity and the public's desire for legislators to hold four-year public institutions accountable. Policy implementation may not necessarily be focused on changing the behavior or preventing sexual violence. Policy presence requires institutions to comply at minimum levels: report when cases occur, involve the appropriate authorities (i.e., law enforcement) or support agencies either on- or off-campus. This policy does not necessarily require institutions to create an anti-power-based violence environment, remove barriers to reporting, or enable a warmer campus climate for those who may experience sexual violence. California AB 1433 and New York Amendment 129-B establish the lowest common denominator in the respective states for institutions to address campus sexual violence.

For states that have a state-level Title IX policy in place, expectations for institutional compliance to the policy should not drive change. State legislators or senior-level decision makers for higher education (i.e., the governor) may consider incentivizing desired outcomes that are similar to performance-based funding: asking institutions to achieve certain benchmarks to secure funding at base levels or being rewarded additional funding for exceeding expectations. Policymakers can consider tying supplemental funding dedicated specifically to increasing sexual misconduct support services in four-year public institutions in place of focusing on policy compliance. Although counterintuitive, institutions with higher reporting levels should be rewarded or compensated for the sustained effort of compliance and transparency. An increase in reports can also signal an increase in sexual misconduct, which should be met with greater human, capital, and financial resources to assist reporters at the institutional level.

For states that do not currently have this type of policy or are considering implementation, this study indicates that states should adopt state-level Title IX legislation only after more research is conducted. Shifting from a penalty-based framework to a reward-based framework may incentivize institutions beyond the low levels of compliance with the bare minimum (French & Raven, 1959). States may find better success with a different type of intervention if they want to affect sexual misconduct incident reporting on college campuses directly. These state-level Title IX policies mirror federal Title IX, layering them with the states taking initiative to shift away from coercing compliance to providing resources in meaningful ways may help change reporting outcomes. Qualitative research may help accurately pinpoint what is driving changes in incident reporting at four-year public institutions in the treatment states and more effectively hone a policy intervention. Once rigorously studied, the findings can

be applied to change statewide intervention strategies, or more specifically guide states considering adopting some type of intervention to address campus sexual misconduct.

### **Implications for Practice**

This study examines state-level effects and underscores the essential contributions of institution-level sexual violence responders, caregivers, and stakeholders assisting students through their experiences with this type of misconduct. Close examination of reporting patterns and missingness highlights the critically important role campus-level administrators and practitioners play in documenting incidents, the lack of reporting of off-campus incidents, and its implications. This policy analysis also creates urgency for institution-level sexual violence responders to strategically amplify their voices and experiences to state-level decision-makers to influence the future of addressing this issue in higher education.

Data collection and analysis revealed significant missingness overall, yet incident reports from on-campus locations, including on-campus housing entities, were the most complete reporting categories. This pattern indicates that students with deep campus relationships or institutions with clear messaging about sexual misconduct behaviors may be more likely to report misconduct (Bergman et al., 2002; Orchowski et al., 2009; Spencer et al., 2017; Zinzow & Thompson, 2011). Those who report may perceive institutions as more responsive to incidents occurring on-campus, within the institutional locus of control, versus reporting an incident that occurred off-campus and perhaps having to report to a law enforcement entity. While the policy effect does not drive sexual misconduct reporting trends, the work done by university administrators, especially in student-facing roles, is critical in capturing more accurate reporting trends. This phenomenon is more deeply understood by the accurate alignment of reporting to reflect what is happening on college campuses; once this can be accomplished at increasing

levels, underreporting of these incidents becomes less severe. When accurate incident reports share the story of who experiences this type of violence, the more practitioners can address this complex issue more comprehensively, beyond the context of mere policy compliance.

Close examination of the data revealed the need to focus on off-campus incident reporting. Clery and VAWA off-campus reports were missing at significantly higher rates than on-campus reporting categories when looking at total incident reports in a disaggregated manner. There is an opportunity for institutional decision-makers to provide resources and frameworks for student-facing colleagues to educate students about the expectations, reporting mechanisms, and support resources available to them regardless of where they may experience sexual violence. If students experience sexual violence off-campus, they are entitled to receive the support and care offered to students reporting incidents on-campus. The difference in reporting between on-campus and off-campus incidents may also suggest a hesitancy in reporting to off-campus resources, specifically law enforcement (Zinzow & Thompson, 2011). Qualitative research (e.g., individual interviews with student survivors; focus groups with student organizations committed to violence prevention) may illuminate the answers to these questions, uncovering why incident reporting on-campus versus off-campus varies so widely.

Finally, there is room for growth and strategic effort in combining the voices of institution-level responders of sexual violence to be shared at the state level. This research focuses on the state-level trend reports, not necessarily why reporting patterns are happening the way they are. The collection of campus-level practitioners entrenched in sexual violence prevention can assist state-level policymakers' meaning-making process. The collective voice of violence prevention practitioners sheds light on the scope and nuance of the problems institutions may face with sexual misconduct and how both institution- and state-level interventions can

work symbiotically to address this campus violence more effectively. Combining quantitative analysis with qualitative storytelling can further solicit resources and support to make a difference in sexual violence prevention work in higher education.

### **Implications for Theory**

This study utilized two frameworks to help explain the effect of a state-level Title IX policy on sexual misconduct incident reporting. Principal-agent theory and the policy innovation and diffusion conceptual framework provided a more complex and comprehensive examination of this phenomenon. Many higher education policy studies focused on an accountability outcome (e.g., performance-based funding policy) to uncover if policy mechanisms produce the intended outcome of the decision-makers. While each policy has unique metrics used to make this determination, results provide mixed guidance as to their efficacy. A study that also utilized difference-in-differences analysis and principal-agent theory points to the need to keep these policies in place long enough to accurately determine if there is a true policy effect or not (Hillman et al., 2015; Tandberg et al., 2014) This study reinforces such an observation; there were only four post-policy intervention years available to include in the study. Simply, the post-intervention time frame may be too short to uncover an accurate reporting trend and possible policy effect.

The treatment states' reporting trends also affirm principal-agent theory as a reasonable theoretical application. Generally, an increase in mean total incident reporting across all states indicates compliance with the state policy. On average, state appropriations and grant funding increased over time, suggesting that states did not withhold financial resources due to non-compliance. In this instance, the institutions (or agents) complied with the state legislature's (principal's) contract; however, the contract did not drive change in reporting trends. Due to the

nature of sexual misconduct reporting and the common misperception of high reporting levels as a significant detriment to institutions, it is reasonable to consider that institutions were not acting in their self-interest when reporting at higher levels. As such, institutions should be rewarded for increased incident reporting by receiving additional state support to combat campus sexual violence. Institutions should be able to dictate what type of aid or support from the state would be most impactful in addressing their specific needs, even as the needs shift over time.

This study is a working example of how institutions within the same region or academic compact may experience similar policy outcomes differently. Examining the California policy within the WICHE and never-adopters control groups allude to this; the effect size was larger in the WICHE group than the never-adopters group. Some WICHE states possess some sort of state-level Title IX policy in effect, but none with California's financial penalty and specificity. Although WICHE member states may have a range of campus sexual misconduct policies, California's reporting patterns indicate the members do not experience the outcomes similarly. Additionally, this study focused on the policy effect, not necessarily why the states adopted the policy or its diffusion across states. However, future iterations may focus more intently on the diffusion aspect of Hearn and colleagues' (2017) model. Since there was no statistically significant policy effect in this examination, future studies may explore how other academic or regional compacts make decisions related to higher education policy by using multiple control groups and a national set of never-adopters.

### **Implications for Research**

This study expands the reach of higher education policy research, especially within the area of campus sexual assault. It underscores the need for campus sexual violence research to be multi-disciplinary, intersectional, and utilize mixed methods to more fully uncover the impact of

campus sexual violence on college campuses. When critically analyzed, qualitative research in education, psychology, public health, or the legal profession reveals individual victim-survivor challenges or predictors of experiencing violence in smaller and quieter ways. Quantitative analysis fails to provide context for why interventions are enacted or describe the impact of a policy intervention on lived experiences. When multiple disciplines and methods are combined, a central and focused research agenda can be created to address decision-makers at all levels to advocate for change more forcefully. Campus and public policies can be revised, laws reshaped or changed, and healing and recovery services reimagined to address the needs of victim-survivors and deter future perpetrators.

In subsequent iterations of this type of study, it would be beneficial to utilize multi-level modeling and expand the data included in analyses. Disaggregated data about the reporters (i.e., social identity descriptors like gender, race, age, sexual orientation, ability), the data collectors (i.e., campus-based administrators in differing roles: behavioral health counselor versus Title IX coordinator), and institutional characteristics (i.e., culture) help paint a more nuanced picture of sexual violence on a particular campus or group of campuses. This strategy leans upon Hearn and colleagues' (2017) policy innovation and diffusion model by capturing the environment in which policy is adopted and created through the organizational and politico-institutional contexts.

There is still no standard definition of "sexual violence" or "sexual assault" regarding state law and higher education policies at the institutional level. This study incorporated many types of misconduct and criminal behavior into the definition of "sexual violence" but did not advance toward a standard definition for campus sexual assault researchers. The results must be

interpreted with awareness of this study's conception of sexual misconduct, yet future studies should consider moving closer toward a more widely used definition of the phenomenon.

### **Recommendations for Future Research**

This study focused on the effect of state-level Title IX policies on sexual misconduct incident reporting in public four-year institutions as a possible policy lever to address the enduring issue of campus sexual violence. The study utilized data from multiple sources for ten years, yet the significant missingness of data reported by institutions does not provide a clear or definitive picture as desired. Many institutions did not record certain types of incident reports or submit data for all years in the sample. In future iterations of studies utilizing VAWA and Clery reports, imputing data to produce a synthetic control dataset with limited missingness, and use of multi-level statistical models should be considered. Addressing missingness may allow for other statistical techniques that were not possible in this study due to the missingness of the data. If policy effects are detected once missingness is more complexly addressed, this can inform state policymakers in more refined and targeted state-level policy interventions to address campus sexual violence. Multi-level models that can account for state and institution fixed-effects may help detect a possible policy effect. Further, including additional states in other control groups, or examining other states with state-level Title IX policies without “financial teeth,” may also provide more nuanced insight into this type of policy's effect on changing the landscape of campus sexual violence.

A glaring weakness in the study that perpetuates rape culture<sup>8</sup> is how this data is collected and what information is collected about the students or campus community members that report

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<sup>8</sup> Within the context of higher education, rape culture is defined by “the sanctioning of hegemonic masculinities, particularly among all-male social and athletic groups, the prevalence of alcohol use and abuse on college campuses, the media's role in both supporting men's violence against women and promulgating indifference to rape, and the persistent belief of silencing survivors.” (Marine, 2019, p. 66)

sexual violence. Both Clery and VAWA reports are tracked by “male” or “female” identifiers, a binary that does not accurately capture how individuals who experience this violence may choose to identify their gender. Male and female are used as a proxy to gender here, which is problematic and inaccurate. Sex and gender are not equivalent descriptors and cannot be used interchangeably (see Schellenberg & Kaiser, 2018). Extant and emerging research on campus sexual violence reveals how prominent this type of violence is among individuals who identify as non-binary, transgender, or men. This research perpetuates the dominant narrative that sexual violence happens to cisgender women by cisgender men simply because there is no other way to report gender. This study does not complicate the dominant narrative. Future scholars and practitioners should alert the appropriate influencers in their communities to push back on this narrative and method of data collection. This study also calls on the federal and state-level decision-makers who direct and implement this data collection process to change gender identifying language to capture how current students identify themselves accurately. Properly understanding who is experiencing campus sexual violence allows decision-makers at many levels to target more effective interventions, create and provide relevant support services, and put intersectional and trauma-informed care at the center of these support models.

Additionally, this quantitative policy analysis should be paired with qualitative studies in the treatment states to understand what is driving change in total incident reporting patterns. This approach lends itself particularly to the collaboration between scholars and practitioners working directly with issues of campus sexual violence to move this area of study forward. The lack of policy effect leads to questions that can be explored at the institutional level and aggregated up to the state level to share with decision-makers strategically. What is working on campuses that leads to increased incident reporting? Are increased reports driven by increased access to support

services or services that reporters find helpful and healing? Qualitative research to supplement this study may help reveal if increased incident reporting is consistent with increased sexual violence or reduced barriers to reporting. If barriers are being lowered, it would be helpful to identify the effective techniques to share with state-level legislators to shift from penalties for non-compliance to reward for creating a culture of anti-violence. Future quantitative research may include state-level research models that account for within-state differences. Similarly, qualitative exploration of decreased reporting rates in New York will aid in understanding if the violence itself has decreased or if a chillier environment for reporting developed after the state-level policy intervention.

Finally, this study provides urgency to identify the opportunity cost of when campus administrators are focused on policy compliance versus creating a culture of anti-violence on their campus. Scholars of campus sexual violence are increasing the calls for prevention and eradication efforts to be divorced from compliance; addressing campus sexual violence will not come from state or federal level policy compliance to Title IX. Case studies may be used to discover what is lost when campus stakeholders are handcuffed into focusing on compliance versus creating a comprehensive and deeply rooted culture of anti-violence. How would the cultural shift from compliance to anti-violence help change the dominant intervention strategy? What would students gain from this shift in priorities when looking to “solve” campus sexual violence? These questions help advance the discussion of campus sexual violence by understanding the cost of the “compliance mentality,” and exploring the possibility of an abolitionist approach to the issue. Tackling campus sexual violence in meaningful ways requires scholars, practitioners, and decision-makers at all levels to critically consider abandoning

previous methods of resolution for a more radical approach that truly affects students' experiences in a healthier, positive, and truly preventative way.

This research urges scholars to strategically collect findings of campus sexual violence and share them with state and federal leaders to begin shifting how institutions of higher education respond and address this phenomenon. Fifty years of persistent patterns call for evolved strategies beyond policy compliance and to wider-reaching, systemic methods that eliminate the violence at its roots. Federal or state-level policies are not driving changes that policymakers intended; alternative and practical solutions are direly needed.

California and New York are two large, forward-thinking, and early-adopting states regarding state-level higher education policy. As these two policies are studied more in-depth and further insight is gained from the effects, California and New York legislators can begin to reshape the future of campus sexual misconduct policy and may even consider abolition. These two states, and the decision-makers within them, have the opportunity to change campus sexual misconduct on college campuses once again.

## Appendix A

### Legislative Comparison of State-Level Title IX Policies in California and New York

	<b>California</b>	<b>New York</b>
Citation	A.B. 1433, 2014 Leg. (Ca. 2014).	NY Educ L § 6446 (2015)
Name	Student Safety	Implementation by Colleges and Universities of Sexual Assault, Dating Violence, Domestic Violence and Stalking Prevention and Response Policies and Procedures
Bill Name	Assembly Bill No. 1433	Chapter 76 of the Laws of 2015, Education Law Article 129-B
Date Enacted	29 September 2014	7 July 2015
Sponsors	Gatto	LaValle (Senate) Glick (Assembly)
Legislative Entity	Assembly	Introduced by Governor
Policy on file	by 1 July 2015	by 5 October 2015; renewed every 10 years
Prevention	N	Y
Training	N	Y
Accountability	N	Y
Funding	Cal Grant monies	"State aid or assistance"
Jurisdictions applied	University of California system, California State University system, California Community College system, public institutions with 1,000+ FTE students, receiving public funds for student financial assistance	All institutions of higher education in NY state regardless of designation or eligibility to receive federal or state funding; <i>"any college or university chartered by the regents or incorporated by special act of the legislature that maintains a campus in New York"</i>

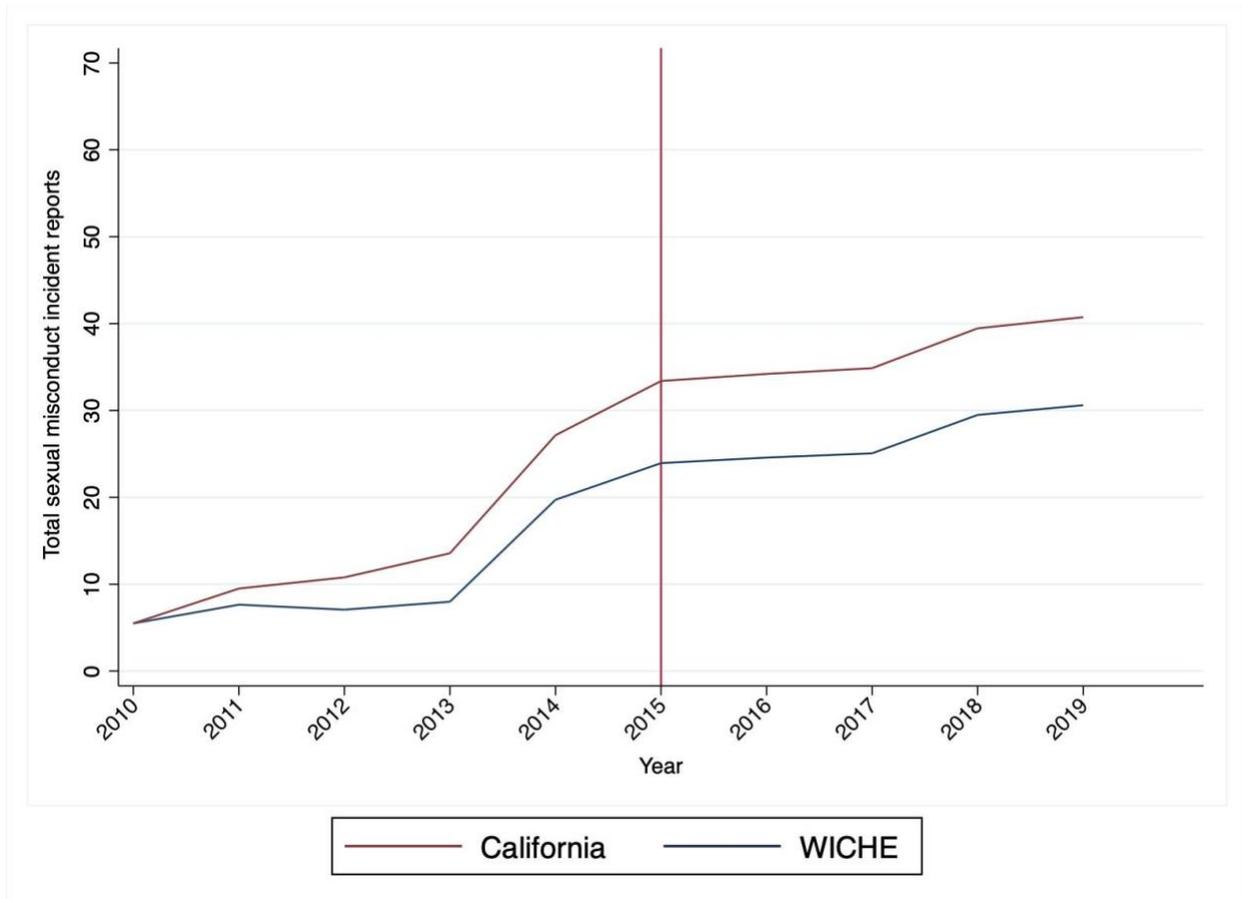
Institutional action to keep funding	<ol style="list-style-type: none"> <li>1. Disclose sexual assault incidents to law enforcement while maintaining victim confidentiality (unless waived by the victim)</li> <li>2. Adopt and implement written policy and procedures addressing sexual assault by 1 July 2015</li> <li>3. Make policy readily and obviously available to students</li> <li>4. Connect AB 1433 to the penal code, which describes incidents of sexual assault</li> <li>5. Define sexual assault</li> </ol>	<ol style="list-style-type: none"> <li>1. Adopt written rules that comply with Article 129-A and 129-B (types of incidents that need to be reported, locations of incidents - on or off campus - and mostly focused on the investigation, adjudication, or outcome of SAP cases at the institutional level)</li> <li>2. Annually file for a certificate of compliance with the NYSED</li> <li>3. File a copy of all rules and policies described in the two articles by July 1, 2016, and every ten years after</li> <li>4. Adopt affirmative consent policies</li> <li>5. Adopt and uphold a state-wide alcohol/drug amnesty policy</li> <li>6. Insert a student bill of rights into the institutional policy (i.e., code of conduct)</li> </ol>
Definition of Sexual Assault	<p>“Sexual assault” includes, but is not limited to, rape, forced sodomy, forced oral copulation, rape by a foreign object, sexual battery, or the threat of any of these.</p>	<p>Define the variety of sexual crimes or assaults to be consistent with the Clery Act as amended by VAWA (to include stalking, domestic violence, dating violence)</p>

## Appendix B

### Linear Trends for California and New York DID models

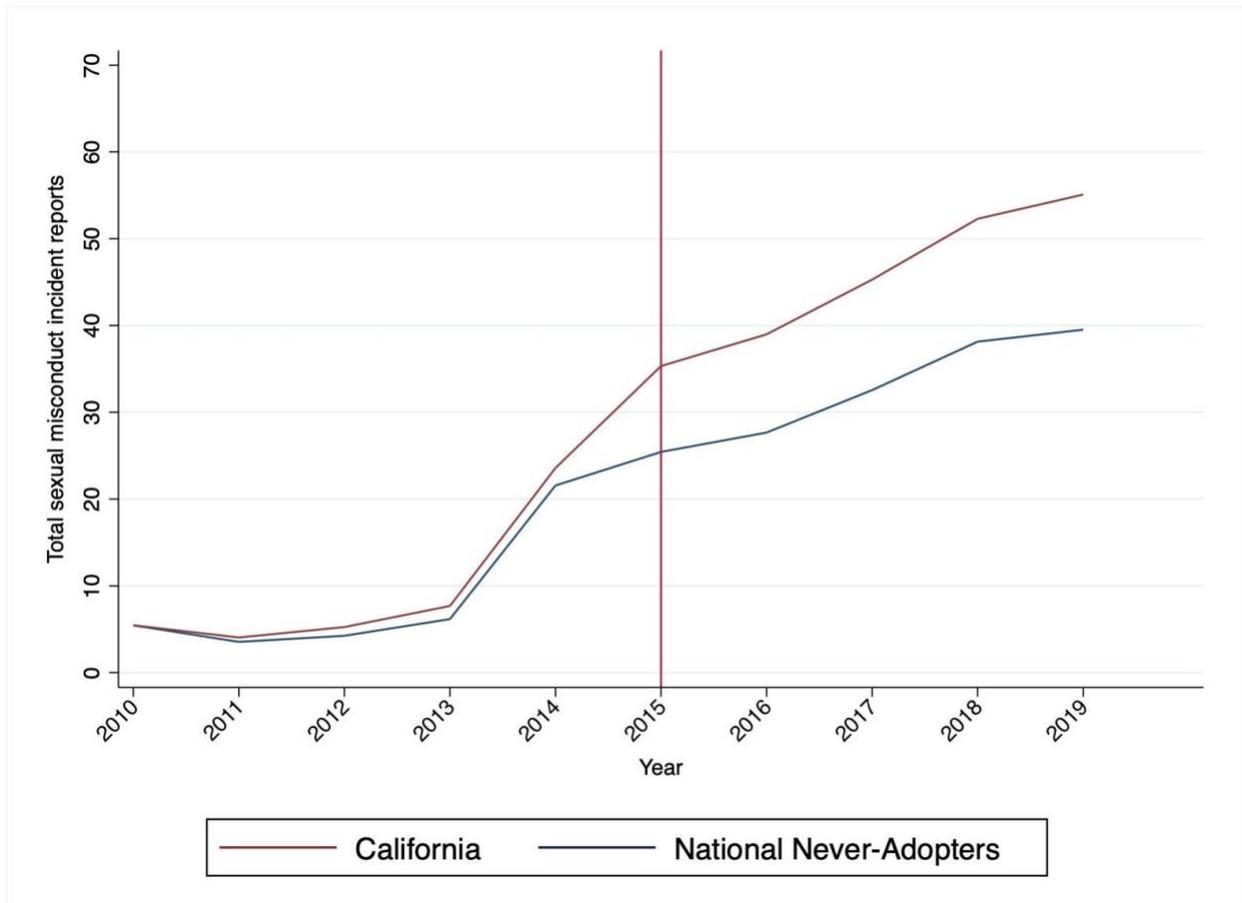
**Figure B1**

*Visual Diagnostics for Parallel Trends (Linear Trends), California and WICHE*



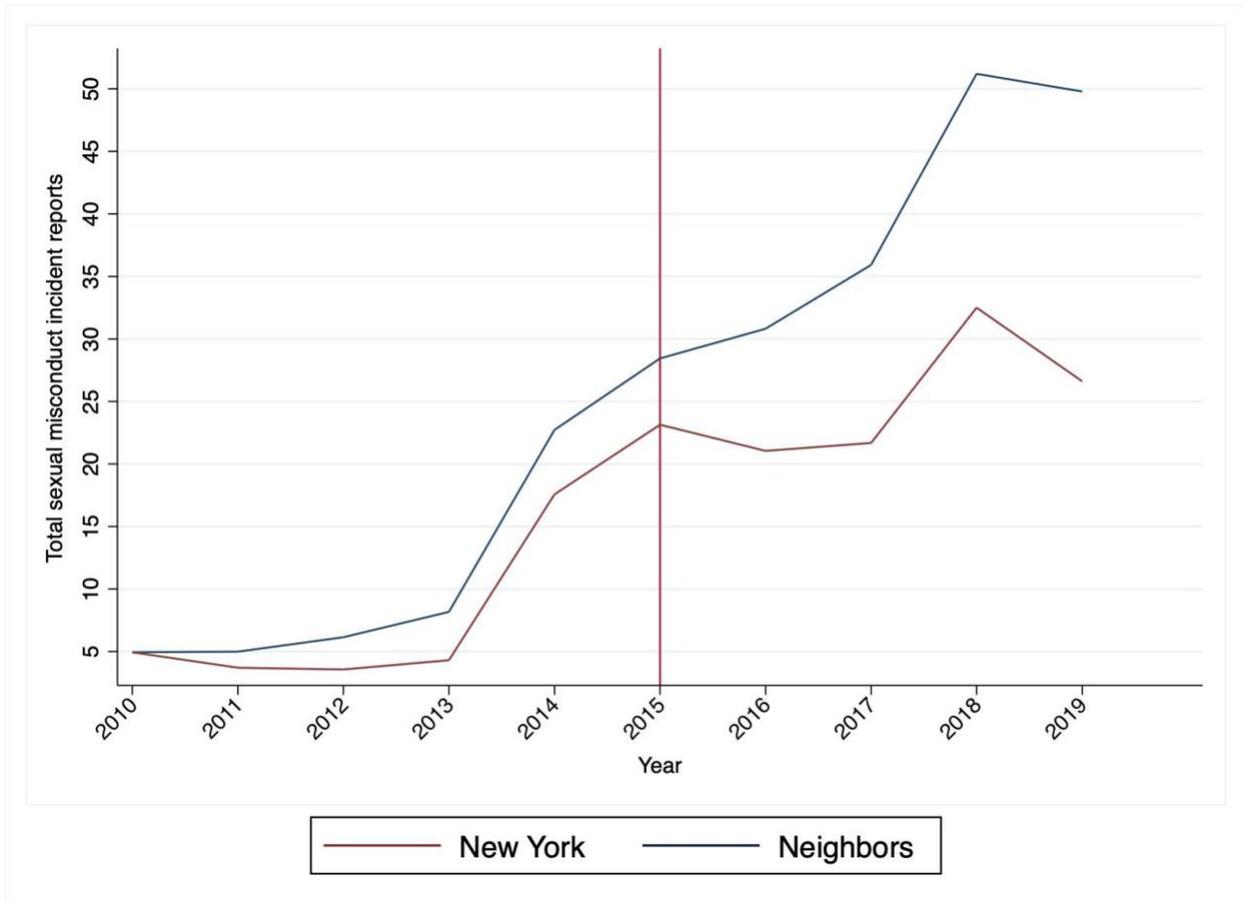
**Figure B2**

*Graphical Diagnostics for Parallel Trends (Linear Trends), California and Never-adopters*



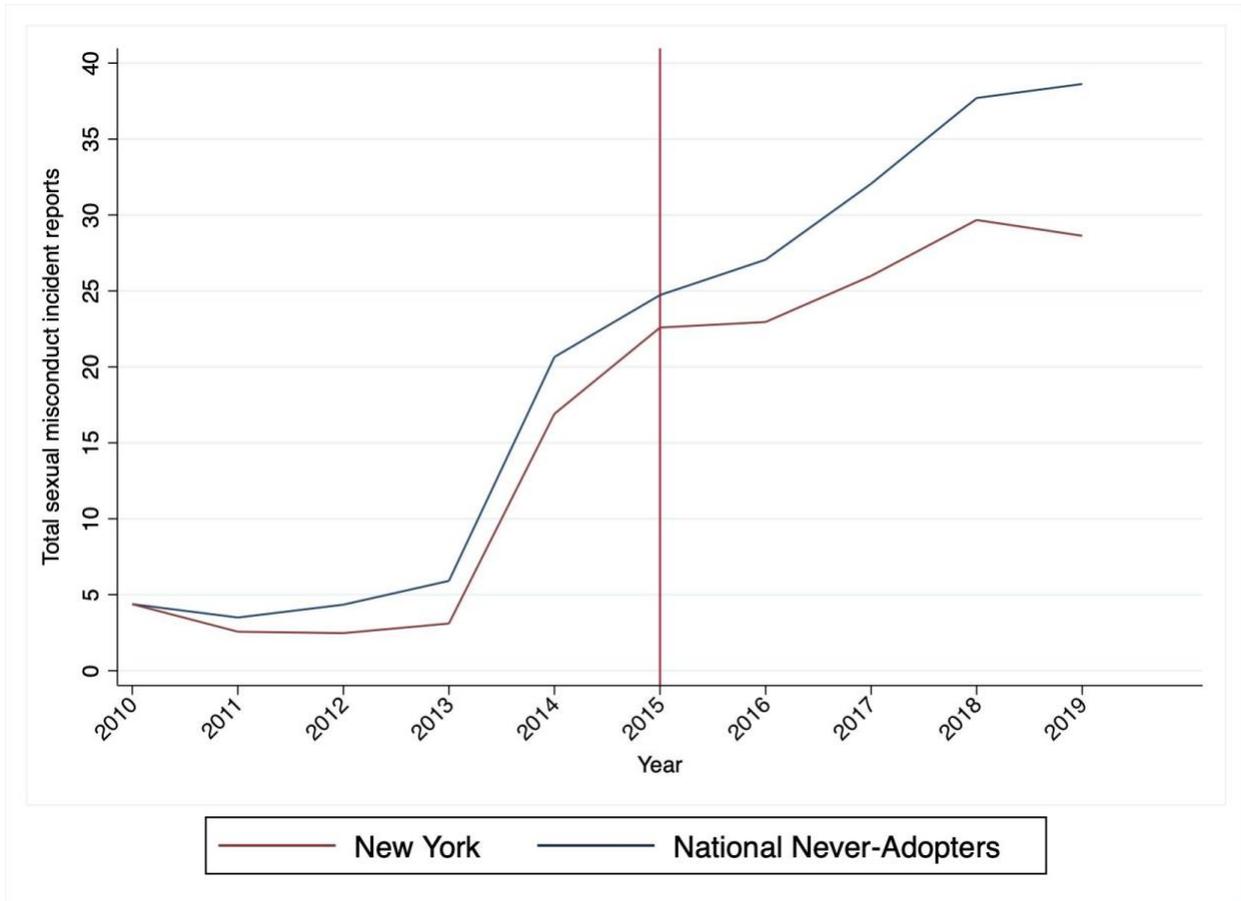
**Figure B3**

*Graphical Diagnostics for Parallel Trends (Linear Trends), New York and Neighbors*



**Figure B4**

*Graphical Diagnostics for Parallel Trends (Linear Trends), New York and Neighbors*

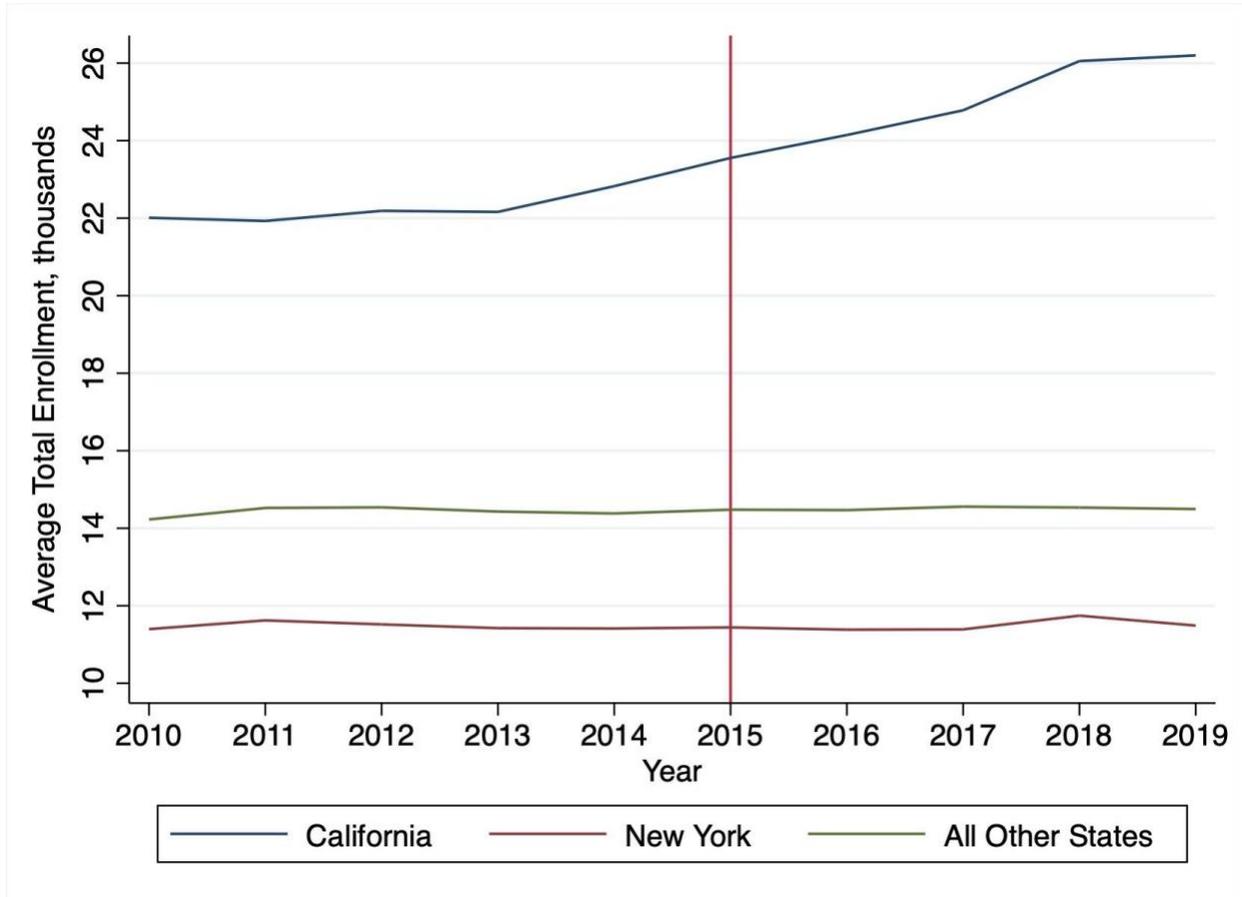


## Appendix C

### Mean Trends for Control Variables

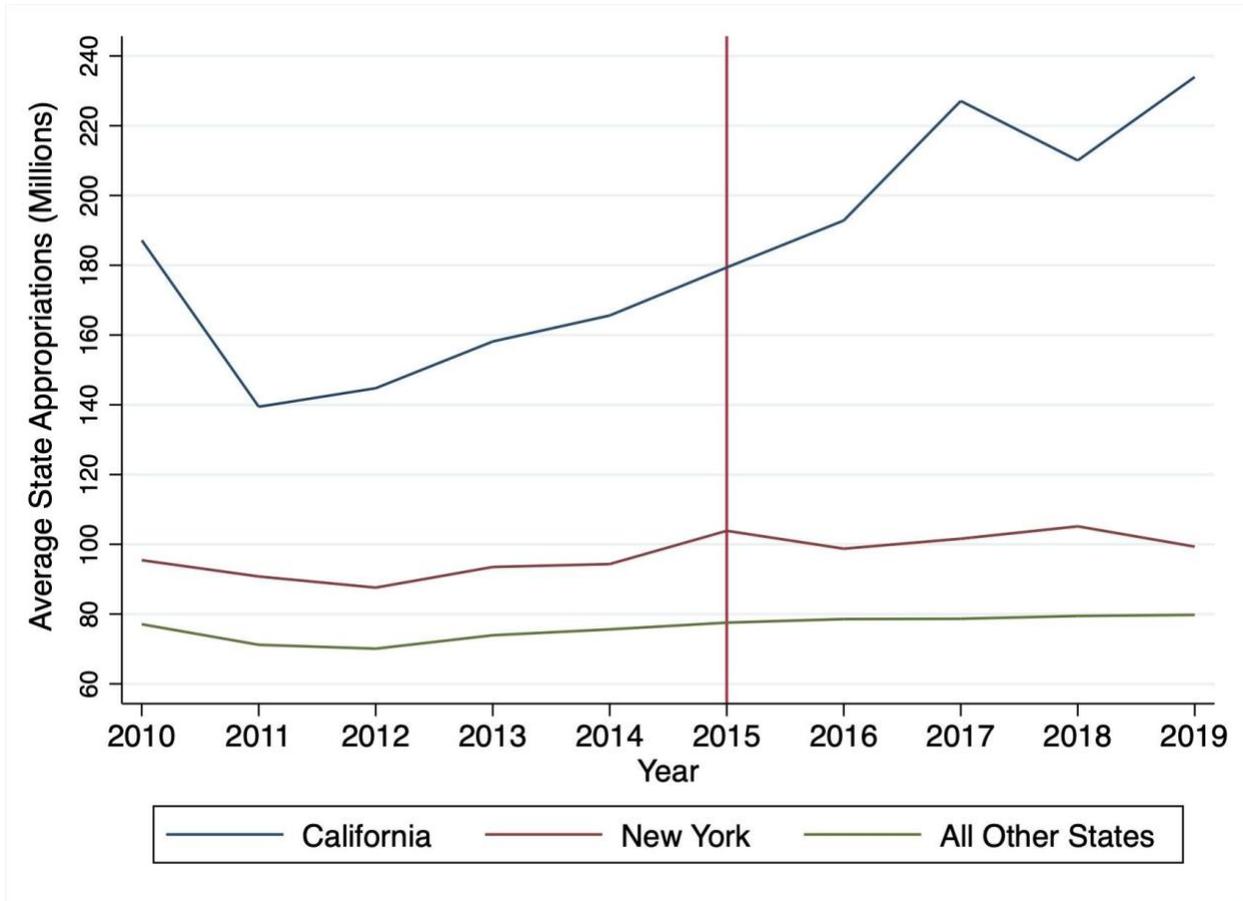
Figure C1

*Mean Enrollment in California, New York, and All Other States*



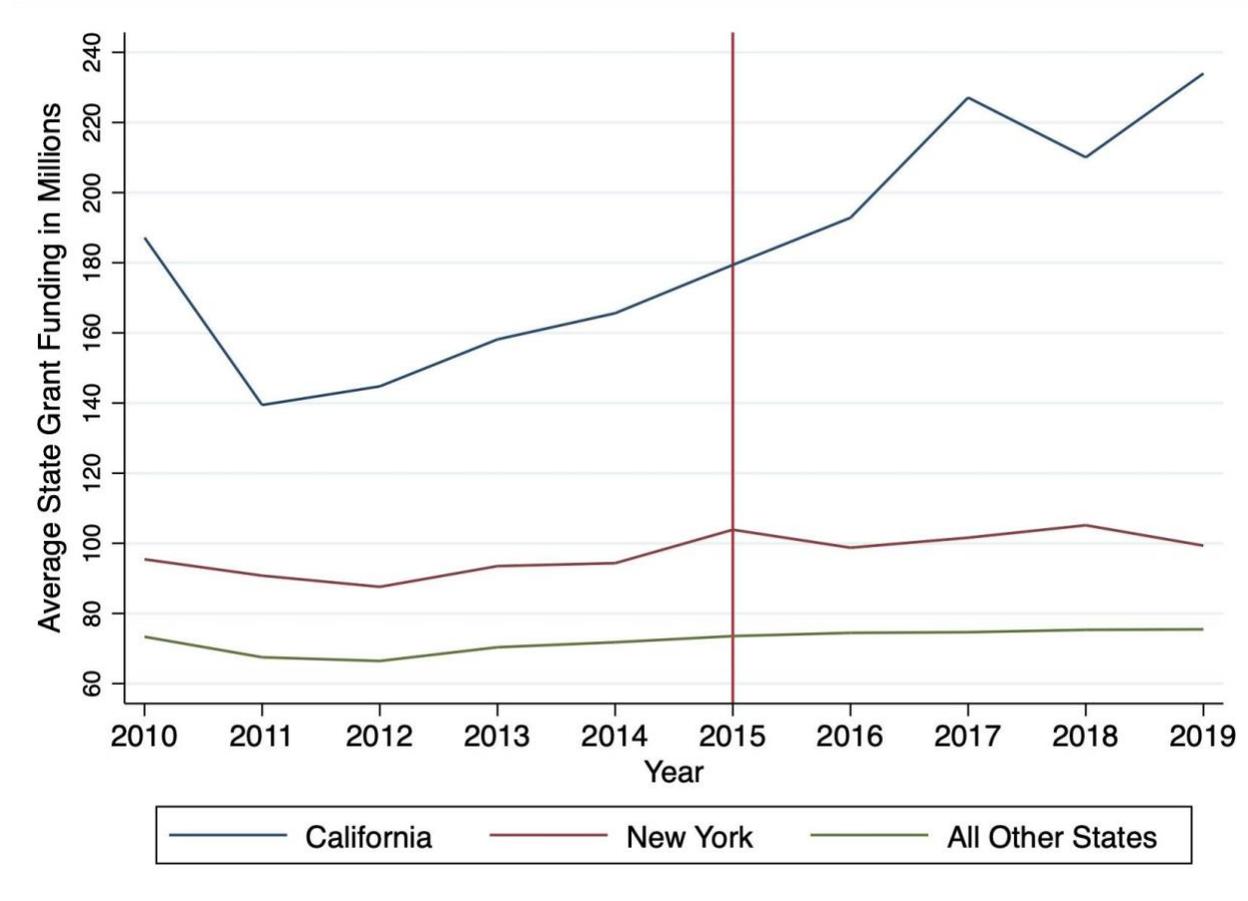
**Figure C2**

*Mean Appropriations in California, New York and All Other States*



**Figure C3**

*Mean State Grant Dollars in California, New York, and All Other States*



## Appendix D

### List of Variables

<b>Name</b>	<b>Label</b>	<b>Explanation</b>	<b>Source</b>
ipedid	IPEDID	Institution's unique IPED identifier code	IPEDS
year	Year	Calendar year; 2010 to 2019	
name	Institution Name	Name of an institution within data set	IPEDS
state	State	Name of the state within the data set	IPEDS
VAWAon	VAWA on-campus incident reports	Incident reports of domestic violence, dating violence, and stalking behaviors which occurred on campus; 2014- 2019	U.S Department of Education (Campus Safety & Security)
VAWAoff	VAWA off-campus incident reports	Incident reports of domestic violence, dating violence, and stalking behaviors which occurred off-campus; 2014- 2019	U.S Department of Education (CSS)
VAWAhouse	VAWA on-campus housing incident reports	Incident reports of domestic violence, dating violence, and stalking behaviors which occurred in on-campus housing; 2014- 2019	U.S Department of Education (CSS)
CleryOn	Clery on-campus incident reports	Incident reports of non-forcible sex offenses, forcible sex offenses, rape, statutory rape, and fondling which occurred on campus; 2010-2019	IPEDS
CleryOff	Clery off-campus incident reports	Incident reports of non-forcible sex offenses, forcible sex offenses, rape, statutory rape, and fondling which occurred off-campus; 2010-2019	IPEDS
CleryHouse	Clery on-campus housing incident reports	Incident reports of non-forcible sex offenses, forcible sex offenses, rape, statutory rape, and fondling which occurred in on-campus housing; 2010-2019	IPEDS

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totrep	Total Incident Reports	Total incident reports for the institution in any given year; a composite score of domestic violence, dating violence, stalking behaviors, non-forcible sex offenses, forcible sex offenses, rape, statutory rape, and fondling; 2010-2019	U.S Department of Education (CSS); IPEDS
fenroll	Female Enrollment	Female enrollment figures for an institution in a given year	IPEDS
menroll	Male Enrollment	Male enrollment figures for an institution in a given year	IPEDS
totenroll	Total Enrollment	Total enrollment figures for the institution in a given year; summation of female and male enrollment for that year	IPEDS
grant	State Grant Dollars per year	State grant dollars allocated for an institution in a given year	IPEDS
approp	State Appropriation Dollars per year	State appropriations dollars allocated for an institution in a given year	IPEDS
cpi	Consumer Price Index	Adjusting variables describing dollar amounts for inflation	Federal Reserve Bank of Minneapolis
gov	Governing Structure	Governing structure for an institution in a given year 0 No system 1 Coordinating Board 2 Governing Board 3 Governing and Coordinating Boards 4 Advisory board (Ohio only)	Association of Governing Boards
policy	Policy presence	Indication of policy presence in a given state; 0 = no policy, 1 = state-level Title IX; 2010-2019	Education Commission of the States

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