The Institutional Costs (and Benefits) of Faith-Based Title IX Exemptions: Enrollment, Faculty, and Finance

Clay Collins
Department of Kinesiology, University of Georgia

Dinushka Paranavitana
Department of Economics & Business, Southwestern University

August 2026

PRELIMINARY DRAFT

Abstract

Title IX exemptions allow educational institutions that are associated with religious organizations to bypass specific anti-discriminatory rules if compliance conflicts with the organization's religious beliefs. Over 100 institutions have received Title IX religious exemptions, with the majority of fillings concentrated in the period after 2014, when exemption requests began rising sharply. Yet the effects of these exemptions are understudied. Using a coarsened exact matching (CEM) framework and data from the Integrated Postsecondary Education Data System (IPEDS), we find that receiving a Title IX exemption has significant effects on both students and faculty. Title IX exemptions result in increased applications, student enrollment, and admissions rates particularly for female students. Faculty at exempt colleges also appears to increase slightly, but external hires decrease. We find little evidence that exemptions affect college finances. These findings argue that, in the marketplace of primarily small colleges, a Title IX exemption functions as a form of product differentiation.

Keywords: Title IX, religious exemptions, college enrollment, faculty hiring JEL codes: I23, J16, Z

Acknowledgments

The authors would like to thank participants at the Southern Economic Association and Western Economics Association International Conferences. We would like to thank Rodrigo Aranda, Tim Bersak, William Duncan, Hannah Evans, Sarah Hamersma, Amanda Hernandez, Joshua Hess, Madison McCormick, Robert Mohr, Sheena Murray, and David Slusky for their helpful comments and feedback on earlier versions of this paper. We are also grateful to Juan Carlos Martinez Varela for research assistance. The authors declare that they have no relevant or material financial interest related to the research described in this paper, and have received no research support, funding, or other financial assistance for this project.

1 Introduction

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. This law was enacted to support and update Title VI of the Civil Rights Act of 1964, which banned several forms of discrimination in employment within federally funded private and public entities. However, it did not specifically address sex discrimination or apply to educational institutions. In today's context, Title IX is predominantly in media as a sports equity law, due to its impact on high school and collegiate athletic programs. However, Title IX can refer to virtually all aspects of a college's environment, including student applications, campus housing, and hiring practices. In addition to this, the law itself contains an understudied exemption, where educational institutions that are controlled by a religious organization may claim an exemption from any Title IX provision that conflicts with their religious tenets. Since 2014, over 100 private religiously affiliated colleges have received Title IX exemptions from the Office of Civil rights (OCR), but interestingly, exemption status can be invoked retroactively. Despite this, many higher education institutions have preemptively filed for exempted status. While its popularity grows among religious colleges, Title IX exemptions remain an empirically understudied area. We believe that examining its implications and its effects on institutional outcomes is an important area of study considering that it affects a wide range of stakeholders including students, employees, alumni, and donors.

This paper (to our knowledge) provides the first empirical estimates of the effects of Title IX exemptions on several university outcomes. We use institution-by-year data from the Integrated Postsecondary Education Data System (IPEDS) from 2005 to 2022 with a coarsened exact matching model that pairs with data from the Pregnant Scholar which identifies religiously exempt institutions. We estimate the effects of exemption on student, applications, admissions, enrollment, graduation, and retention rates. In addition, we extend the estimation to examine faculty compositions, and institutional finances.

Our results demonstrate that receiving a Title IX exemption is associated with a 2 percentage point increase in admissions and significant increases in applicants, specifically, women applicants and enrollment increase by approximately 237 students in higher education institutions. We observe no changes to retention rates, with a modest increase in graduation rates for women. On the faculty side, we find some unique results; exempt institutions show an increase of 1.56 people in tenure track faculty lines, however, new external hires have decreased by around 2.1 people. We additionally find no significant evidence on effects to donations or gifts, with some limited evidence suggesting expenses may increase.

We propose several interpretations of these results. First, it appears that exemptions serve as an implicit signal of religious identity. In the market for prospective students, the religious exemption can function as a costly signal, institutions that file for exemptions may be viewed as more religiously aligned and become more attractive to a subset of prospective students and faculty. We propose that this signal is transmitted through an in-group network (churches). This channel appears to be better processed by female prospective students, which reflects in the literature found in sociology and education. We find no evidence of a "backlash" effect, where a school's reputation suffers from being perceived as "less-inclusive". In the market for faculty, more mixed effects are found. Exempt schools hire more faculty in response to the enrollment increase, but seem to prioritize internal (in-group) hires over external ones.

The paper is structured as follows. Section 2 describes the institutional background of the Title IX religious exemption and provides contextual history of the ties between religion and higher education choices in the US. Section 3 provides further background on the current and established literature. Section 4 describes

our data. Section 5 presents our estimation and empirical strategies. Our results are described in Section 6, and Section 7 concludes.

2 Background

On June 23rd 1972, President Richard Nixon signed Title IX into a federal civil rights law as a part of the Education Amendments of 1972. The religious exemption was enacted with the original Amendments of 1972 (Back and Cole, 2023), and the earliest recorded educational institutions that filed for a gender-based exemption are noted in 1975 (Department of Education, 2016). Since its establishment, there have been periodic exemptions filed for gender-based discrimination[1]. Requests for exemptions do not automatically cover all possible exemptions, and recent requests for exemptions have focused on the basis of marital status, sex outside of marriage, sexual orientation, gender identity, pregnancy, or abortion. Our research focuses on these "second wave" exemptions.

In order to qualify for Title IX exemptions, educational institutions should hold at least one of the following prerequisites: that the educational institution is a school or department of divinity, the institutions require students, faculty and staff to be members of the religion the organization is controlled by, has a form of official publication that makes explicit statements that demonstrate that the organization is controlled by a religious body, or is able to provide sufficient evidence that the institutions is controlled by a religious organization. Institutions can claim this status by submitting a written statement to the Office of Civil Rights (OCR). It should be noted that an exemption status can be invoked retroactively. This means that institutions can claim a Title IX exemption after a Title IX case has been filed against the institution for noncompliance[2], before a letter is sent requesting for exempt status. Despite this, over 100 private religiously associated higher education institutions have preemptively claimed exempt status during this "second wave". Exemption status is not a blanket panacea to discriminate [3]. Institutions must specifically request what type of exemptions they are claiming as these can range from admissions, recruitment, access to educational programs/activities/ housing and comparable facilities (including restrooms), health insurance, marital or parental status, and athletics.

In order to help interpret theses institutions incentives for filing preemptively, we informally conducted interviews of faculty and staff from religiously affiliated intuitions in our sample. These conversations are not representative and are intended only to motivate our empirical analysis; several respondents cited that "Dear Colleague" letters (DCL) may have been a driver of preemptive filing, a pattern that is broadly consistent with our results. During this time period, the OCR, under the guidance of various US presidents, have issued several "Dear Colleague" letters clarifying inclusions and exclusions of Title IX. Beginning in 2011, President Barack Obama issued a DCL that stated that sexual violence is a Title IX issue and preponderance of the evidence as standard practice[4], and in 2013, a DCL that clarified that pregnant and parenting students are protected under Title IX provisions. Another DCL was issued in 2016 directing institutions to treat gender identity consistently with sex under Title IX (which included transgender students, the use of pronouns, and access to facilities)[5]. While in the past Title IX applied specifically for gender discrimination against women,

[1] A few institutions have disclaimed exemption status after requesting exempt status early on. For example Pepperdine University waived its exempt status in 2016

[2] Noncompliance of Title IX

[3] Several exempt schools are currently subject to Title IX investigations

[4] This letter was later withdrawn in 2017, but exemptions are still issued.

[5] This DCL was also rescinded in 2017.

this allowed for expansion to also apply for students who identified with LGBTQ+ identities. The issuance of these letters clarifying applicability for LGBTQ+ and pregnant students are simultaneously observed with an exponential rise in higher education institutions applying for Title IX exempt status. While we cannot directly make claims or establish a causal relationship between DCL and the rise of Title IX exemption requests, it is noteworthy to observe that several exemption requests include marital or parental status[6].

2.1 Legal Contestations

Title IX is particularly unique in the fact that the legal precedent for cases are sparse. Cases have existed both in lower and higher courts but it remains unclear on how Title IX exemptions should be applied. Courts have instead sought to simply assess if educational institutes meet the requirements of the exemption. There have been several legal cases where students have filed against their educational institutions, claiming that they were being discriminated against and violating Title IX. These cases often have mixed results, and have been dependent on whether the institution qualifies for religious exemption, and whether qualifying for the exemption includes the right to "discriminate" against the student based on the institution's religiosity.

In *Hall v. Lee College* (1996), a student was suspended after becoming pregnant while unmarried, in violation of the college's policy against premarital sex. The court sided with the college, finding no Title IX violation had occurred at all. A more direct application of the exemption came in *Maxon v. Fuller Theological Seminary* (2021), where the courts held that Fuller's expulsion of two students for entering same-sex marriages fell within the religious exemption, and that the exemption applies automatically, without requiring advance notice to the Department of Education. The exemption's most direct legal challenge came in *Hunter v. U.S. Department of Education*, where more than 30 LGBTQ+ students enrolled in religious colleges argued that the exemption was unconstitutional. In 2023, the district court moved to dismiss the case[7]. The Ninth Circuit upheld this decision in 2024, ruling that the exemption neither violates the Establishment Clause of the First Amendment nor the Fifth Amendment's equal protection guarantee. Taken together, these cases illustrate how the exemption functions in practice: it allows federally funded institutions to discriminate against students on the basis of sex-related conduct or identity, so long as the institution can tie that discrimination to a religious tenet, while still having access to federal funding. This is a sharp contrast to *Grove City College v. Bell* (1984), where the Supreme Court ruled that Grove City College was subject to Title IX because its students received federal grants, and that the college could be required to sign a program-specific assurance of compliance with the law's anti-discrimination provisions. Grove City College chose noncompliance, withdrawing from all federal financial aid programs, and the college has not accepted any federal funding, including Pell Grants, since then.

The regulatory environment around Title IX has also shifted repeatedly in recent years. A 2020 rule clarified that institutions do not need to notify the Department of Education in advance to claim the religious exemption. A 2024 rule then expanded Title IX to cover gender identity, but a federal court vacated that rule in January 2025, reverting institutions back to the 2020 rule (*Tennessee v. Cardona*, 2025). This back and forth shows that the rules governing Title IX remain unsettled, which underscores that the environment surrounding the exemption remains actively contested rather than settled, reinforcing

[6]Marital and parental status can apply to pregnant students, premarital sex, disabilities related to pregnancy, childbirth, termination of pregnancy and recovery therefrom.

[7]The students were able to demonstrate that they were harmed by the exemption, but courts required more than harm to strike down a law. Plaintiffs must also be able to demonstrate that the law, or specifically the exemption, was specifically created to discriminate, rather than for legitimate purpose such as protecting religious freedoms.

the relevance of studying its effects now.

3 Literature Review

This paper makes several important contributions to understanding the impacts of regulations on higher education. Primarily, we are the first to formalize the impact of Title IX's religious exemption. Prior work on the exemption is primarily legal and descriptive with Augustine-Adams (2016) and Faust (2017), documenting the exemption's administrative and constitutional history, while Sorensen et al. (2025) provides a contextual analysis of letters filled for exemptions, while also cataloging institutions that have received Title IX exemptions. However, none of the aforementioned works empirically examine student, faculty, or institutional outcomes.

We also contribute to the growing literature that examines the effects of Title IX overall on higher education. The current literature broadly focuses on Title IX impacts on sports equity (Stevenson, 2010, Stevenson, 2007), Title IX investigations (Reilly et al., 2024, Lindo et al., 2019) and impacts on LGBTQ+ students or sexual orientation (Nightingale, 2021, Yang, 2025). Anderson and Cheslock (2004) identifies that institutions can expand opportunities for women without proportionally cutting funding for men. Kaestner and Xu (2010) and Kaestner and Xu (2006) demonstrates that introducing Title IX had positive effects, including increased physical activity and positive body image for women (lower BMI, lower obesity). Likewise, Beck et al. (2023) identifies that women have better health outcomes and increased education opportunities with Title IX expansions. Our contribution works in the opposite direction, where restrictions, or specifically a religious exemption, work in the inverse direction, allowing institutions to opt out of specific protections. We also contribute new evidence to the literature on how institution's faculty composition responds to labor market and mission related shocks (Bettinger and Long, 2010), as well as the literature on donor behavior based on organizational identity (Rose-Ackerman, 1987, Rose-Ackerman, 1996, Meer and Rosen, 2009). The current literature is honed into exploring the impacts of implementing Title IX and its benefit, however, we observe the opposite direction of how Title IX exemptions may intentionally or unintentionally harm certain groups of students, and potentially other stakeholders.

3.1 Market for Prospective Students

There have been a series of papers examining the market for prospective students. Beginning with Manski and Wise (1983), which concludes that self selection in applications by prospective students is the primary determinant of college attendance, several works have attempted to explain the signaling mechanism colleges present to attract students, the matching used between prospective students and colleges, and the advertising of colleges to prospective students.

Many of the papers examining application or admissions decisions rely on structural modeling, or focus on the effects of changes to admissions policies or financial aid. Arcidiacono (2005) uses a structural model taking into account admissions rules (specifically affirmative action) and financial aid policies and links education decisions to future earnings. Other papers examine an equilibrium framework. Epple et al. (2006) proposes that private colleges will employ different admission and financial aid strategies to maximize student quality subject to its endowments. Fu (2014) expands on this model by incorporating student heterogeneous student abilities and preferences. Other papers, such as Chade et al. (2014), examine the assortative matching

between prospective students and schools.

However, these papers, along with Kapor (2025), assume that colleges maximize the quality of their applicants. Likewise, empirical studies of effects of various shocks to colleges, such as studies on athletics success by Anderson and Cheslock (2004) and Pope and Pope (2009), or studies of university scandals (Johnson and McCannon, 2022), focus on student quality. Using measures of quality (such as average test scores of admitted students or admissions rate), these studies conclude that positive shocks to the college's reputation can lower admissions rates and/or increase the minimum test scores, while negative shocks can increase admissions rates and/or lower minimum test scores.

We offer a slightly different maximization problem for the schools in our sample. Generally speaking, Title IX exempt schools are not particularly known for high quality[8]. The average admissions rate in our total sample of schools is 69%, considerably less than the average R1 research university. In these cases, colleges may not be able to maximize quality.

Instead, we follow the seminal study of Milgrom and Roberts (1986). We propose that colleges are experience goods where quality of institution is unknown[9]. This has been applied in college-specific studies by Howell (2010) and Eble and Hu (2025), albeit indirectly. Schools are advertising a variety of signals of their quality[10]. These signals are picked up on (to varying degrees of accuracy) by prospective students, which can lead to an increase in applications. However, we deviate from other works here by assuming that these schools when faced with a rise in applications will not increase admissions quality, but instead increase admissions *quantity*. By admitting more students, colleges can maximize revenue, agnostic to admissions quality.

Two additional points must be conveyed. First, while initially strange to consider a Title IX exemption as a form of advertising, considerable work in the economics of religion suggests that stricter religious ruling can serve as signals of devotion (Iannaccone, 1992, Iannaccone, 1994). In this sense, a Title IX exemption is a form of product differentiation, where colleges with exemptions are signaling a stronger religious match to more religious students compared to religious colleges without an exemption. Second, we find no evidence of schools directly advertising their Title IX exemptions on promotional material or websites [11]. That being said, we find anecdotal evidence that Title IX exemptions receive considerable coverage in religious newsletters (such as *Baptist Press* and *The Christian Chronicle*). Following the work of Iyer et al. (2005), among others, we propose that news of these Title IX exemptions serve as targeted advertising that is transmitted through religious communities- where such a signal is most likely to be processed.

3.2 Religion, Education, and Gender

Religious affiliation is an economically meaningful characteristic that shapes institutional behavior, determining the type of individuals that it attracts and the outcomes affected by those within the institution. To support this, substantial literature recognizes that religious organizations are distinct actors and that

[8]Though there are some exceptions, such as Brigham Young University.

[9]One distinction from Milgrom and Roberts (1986) is that colleges are not newly introduced. However, the consumers (prospective students) are nonetheless unfamiliar with the colleges and their respective quality. Secondly, colleges are generally not repeat purchases

[10]It is important to define "quality" here. We are incorporating a school's quality to refer not just to their educational quality (as measured by, for example, the lifetime earnings of graduates), but of additional, non-pecuniary benefits as well. These may include campus life, extracurricular activities, and- a primary focus in this case- religious life.

[11]The exception is colleges and universities that are based in California, which are required to publish information on Title IX exemptions they received. See California Senate Bill No. 1146

religiosity shapes school choice and educational attainment, and presents evidence on how these patterns may vary by gender.

Foundational literature treats religious organizations as economic actors whose objectives may not be to prioritize revenue generation or profit maximization, but instead focus on doctrinal commitments that can shape decisions made at institutional levels that are different to other secular organizations[12] (Iannaccone, 1998, Iyer, 2016). Religion plays an important role in school choice that is often unaccounted for. Prospective students with stronger religious commitments are more likely to select religiously affiliated schools even after accounting for academic quality (Cohen-Zada and Sander, 2008). A related literature demonstrates that religiosity is an independent and significant predictor of school choice both between public vs. private schools and among different religious school types (Cohen-Zada and Justman, 2019). Religious identity can also serve as a salient factor that influences economic behavior and decision making, and importantly, can vary systematically based on denomination. Causally identified historical evidence has shown that religious affiliations can have measurable effects on educational outcomes, (Becker and Woessmann, 2009) these conclusions are also echoed in non economic religious literature (Horwitz, 2021). Combined together, this literature motivates the expectation that claiming a religious Title IX exemption could plausibly affect not only students, but faculty employed, as well as alumni and donors connected to the institution.

While the literature in economics exploring the specific influences of religion and different denominations of religions on education and choice may be limited, we find parallel literature in sociology of religion that provides strong contextual evidence of our results, specifically connecting religious conservatism, education, and gender differences. Although students attending more prestigious colleges subsequently benefit from future social and economic benefits (Behrman et al., 1996), many religious individuals, particularly Conservative Protestants (CPs), choose to attend less academically selective colleges (Uecker and Pearce, 2017). CPs in particular hold strong beliefs of skepticism of secular higher education institutions, as their understanding of the world and truth may be limited to what is revealed in religious texts rather than discovered through scientific study (Darnell and Sherkat, 1997, McPhetres and Zuckerman, 2018). CPs then choose to attend less prestigious and secular schools due to their own skepticism, particularly as they hold beliefs that a disproportionate number of faculty are focused on more scientific knowledge as well as a limited presence of more religious faculty (Gross and Simmons, 2009). There is also the perceptions that more secular schools may be hostile to students of faith, and CPs tend to avoid these institutions(Hill, 2011). One other interesting evidence to note is the gender disparity within these religious beliefs and choices in educational institutions. CP men are more likely to be expected to focus on being financial providers for their families, and as a result, are encouraged to attend more selective and less religious institutions (Bartkowski, 2001). This contrasts heavily with the general negative connotation that CPs associate with secular education. CP women are more likely to choose more religious and faith based institutions, as many of them are likely to leave the labor market after marriage or childbirth. The primary goal of CP women are to raise a family, thus attending a prestigious college is not important as the benefits of college do not further their personal goals[13].

3.3 Religiosity of Faculty

The broader academic labor market is not as secular as commonly assumed, most American professors, even

[12]Non-market behaviors influenced by norms, values, social capital and specifically spiritual capital

[13]Benefits to consider here include higher paying employment opportunities, access to networks, and opportunities to pursue graduate education.

at elite research institutions, report holding religious beliefs (Gross and Simmons, 2009), a pattern that extends even to natural scientists specifically (Ecklund and Scheitle, 2007). Gross and Simmons further demonstrate that religiosity varies substantially by academic field and institutional prestige, with faculty at elite research universities somewhat less religious than the professoriate as a whole, though a majority are believers. This suggests that a shift toward internal, tenure-track hiring following an exemption filing is unlikely to reflect a scarcity of religious candidates in the general faculty market, as a sufficiently large pool of religious faculty already exists across institution types. A plausible explanation could be that exempt institutions seek a narrower alignment and that already established faculty offer a credible fit over external hires who maybe harder to verify. This framing is consistent with the "religious economies" paradigm developed by Stark and Finke (2000), who argue that religious behavior, including which religious organizations people choose to join, reflect rational, preference driven decisions such that faculty naturally sort into institutions whose religious commitments match their own.

4 Data

The data for this paper comes from the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS). Collected by the U.S. Department of Education, this data tracks a variety of statistics related to college enrollment, tuition, financial aid, student and faculty composition, and funding. IPEDS has a long history of use in studies of enrollment, tuition, or university finances[14]. We collect approximately 35 variables from private, religiously-affiliated colleges and universities for our analysis. Our panel extends from 2005 to 2022. A detailed list of variables used, as well as descriptive statistics, can be found in Table 2. IPEDS data comes from voluntary reporting and has a long list of reporting criteria. As a result, particularly for small colleges, there may be some concerns regarding accuracy. Nevertheless, with the exception of a few small filters of negative values, we strive to leave our sample as intact as possible.

To identify private colleges and universities, we select universities that report financial data under the Financial Accounting Standards Board (FASB)[15]. We remove a few public universities that report under FASB, then remove all community and junior colleges. We also remove all health science universities, medical schools, beauty colleges, technical schools, acupuncture and eastern medicine colleges, and vocational colleges from the sample. Theological schools are included in the sample. To identify "religiously-affiliated" schools, we use several methods. First, we removed from the sample all schools that had no religious affiliation in the year 2025. This is somewhat problematic as universities become more secular over time, and it is possible that some schools who are not religiously affiliated at the end of the sample period were religiously affiliated at the beginning of the sample. However, we believe such incidents are quite rare, and finding-year-by-year changes in religious affiliation is quite difficult. We also find no evidence of schools in our sample becoming religious over the sample[16]. To identify religiously-affiliated schools, we check each remaining school's website to see if they are affiliated with a religious body[17]. To code schools without a direct tie to a specific religious body, we examined the mission statements of each remaining school. Any school whose missions statement contained words or phrases describing an "adherence to [faith]'s values" was coded as religiously affiliated.

[14]See, for example, Howell (2010), Kapor (2025), Gilpin et al. (2015), and Lucca et al. (2019), among others.

[15]Most public universities report under Governmental Accounting Standards Board (GASB).

[16]Some schools have changed the church they are affiliated with, but our sample does not contain a school that is religious in the present that was not religious 20 years ago.

[17]Though the overwhelming majority of religiously affiliated schools in the United States are Christian, there are over two dozen Jewish Yeshivas and four Buddhist schools in the sample.

This leaves 1,007 unique colleges and universities.

The IPEDS data presents an additional disadvantage, in that data reporting is not consistent throughout the sample. Some variables, particularly related to faculty numbers and demographics as well as admissions standards (such as average ACT scores), are missing for certain schools in certain years. As a result, the panel is unbalanced. A few colleges come into existence during the sample periods, which are included in the sample beginning with their first year of opening. On the contrary, schools that have closed by 2025 are removed from the sample for *all* years, meaning that this sample is under-reporting schools that have closed down over this time period.

A list of Title IX exempt schools comes from The Pregnant Scholar, a legal resource center for pregnant and parenting students offered by the Center for WorkLife Law at the University of California College of the Law. The center has been tracking Title IX exemptions since at least 2024, and keeps an updated list of schools who opt-out of Title IX compliance on religious grounds (Lee, 2025). In addition to a list of schools and the year each exemption was granted, the site also contains each school's official filing documents and the reasoning by which an exemption is granted. To clarify, we are focusing on the "second wave" of Title IX exemptions that focused on granting exemptions on the basis of marital status, sex outside of marriage, sexual orientation, gender identity, pregnancy, and/or abortion. In the majority of cases, exemptions are granted within less than six months of filing. We code the academic year the exemption is granted and all subsequent years as treated. To our knowledge, every request for a Title IX exemption has been granted.

In each request, schools can clarify if they are filling for a Title IX exemption from the "regulatory provisions to the extent that they prohibit discrimination" based on a variety of factors, including marital status, sex outside of marriage, sexual orientation, gender identity, pregnancy or abortion. The school can also clarify where these exemptions are used. Exemptions can be granted governing admission; recruitment; rules and sanctions; "the limitation of rights, privileges, advantages, or opportunities"; housing; comparable facilities (such as restrooms); different rules based on marital of parental status of students; athletics; employment; employee recruitment; or pre-employment inquiries. However, in practice, the overwhelming majority of schools opt for blanket exemptions for all forms of governance for all criteria.

Table 1 contains a list of all schools that successfully received Title IX over our sample period, along with the school's religious affiliation (if any) and the year the exemption was granted. The first school to receive a Title IX exemption specifically regarding transgender students was in 2013 (Maranatha Baptist University), with a steady stream following. Figure 1 shows the total number of "second wave" exemptions over time. One thing to point out is the variety of religious affiliations present in exempting schools, as well as the fact that some schools are not directly affiliated with a church at all, but follow nondenominational creeds.

5 Estimation

We employ a coarsened exact matching (CEM) framework designed by Iacus et al. (2012) and Blackwell et al. (2009). The staggered treatment approach may suggest a differences-in-differences design (such as, for example Callaway and Sant'Anna, 2021). However, there are two unique traits of our data that make a staggered difference-in-differences design not applicable. First, the treatment variable, choosing to enact a Title IX exemption, is endogenous. Schools are actively selecting into these choices. In addition, these decisions could be based on other covariates used as both dependent and independent variables (such as

percentage of the student body who are female). While strategies such as synthetic differences-in-differences (Arkhangelsky et al., 2021) can alleviate this issue, the IPEDS data used suffers from reporting gaps. Many private schools, in particular smaller ones, will not report financial, enrollment, applications, or faculty information for one or multiple years. As a result, the panel is unbalanced. This violates one of the chief assumptions of many difference-in-difference frameworks.

The CEM framework presents also presents unique advantages. Given the wide variety of schools in the sample, measures much be taken to balance the covariates. But unlike other matching methods, such as propensity score matching, CEM can assume that balancing properties hold throughout the entirety of the sample, as opposed to simply on average, and as a result can strictly dominate other equal percent bias-reducing matching methods in reducing imbalance, estimation error, and bias (Iacus et al., 2011). This makes CEM more likely to produce a more accurate average treatment on treated. In addition, CEM can operate with an unbalanced panel structurally similar to a more traditional two-way fixed effects design.

These advantages come at a cost of reduced observations. CEM requires the removal of all observations that are not within a coarsened stratum for which there exists a treated and control unit. This limits the number of observations significantly. However, this is not particularly an impediment because of the relatively large number of initial observations (16,692 school-years). Most matching regressions we employ still produce well over 1,000 matched covariates.

Matching is based on one year lagged measures of enrollment, tuition, admissions rate, percentage of students who are female, retention rate, core revenues, and core expenses. These should create similar strata. When the dependent variable is related to one of these criteria, it is removed from the matching procedure. For example, lagged enrollment is not included in the matching criteria when enrollment is the dependent variable. Each results table specifically lists the matching criteria used in each regression. Lagged measures are chosen because they are exogenous to current-period covariates, and, given the relatively quick turnaround time between requesting and receiving a Title IX exemption, this is the information administrators are using to make Title IX exemption decisions.

The regression itself follows a linear framework, and in many ways is similar to a two-way fixed effects model, but using matched covariates. The model is described below.

$$Y_{it} = \alpha_0 + \beta_1 TitleIXexempt_{it} + \gamma_i + \delta_t + \epsilon_{it} \tag{1}$$

We incorporate school and year fixed effects to control for additional variation in schools that was not picked up with the matching design. In addition, college enrollment has changed throughout the sample period. Enrollment for most schools peaked between 2007 and 2009, and have declined- albeit slowly- since then. Thus, a year fixed effect is needed to help explain temporal variation.

6 Results

Given the wide variety of outcome variables studied, the results are displayed across several tables. We categorize each table to cover one component of a college's student body, from enrollment, to admissions, to retention and graduation, to tuition. We also extend our findings to cover the effects of Title IX exemptions on faculty and school finances. All tables employ a CEM design unless explicitly specified, using a series of lagged variables to develop matched covariates. School and year fixed effects are included in all regressions

but not shown for brevity. Standard errors are shown in parentheses. The exact lagged covariates used for matching are displayed at the bottom of each table. Note that the matching procedure varies between dependent and matching variables, which leads to the wide disparities in observations included for each regression. That being said, all regression have a large number of observations to work with.

Table 3 displays results using enrollment information as the dependent variable. Total enrollment is displayed in column 1, column 2 shows total male enrollment, and column 3 shows total female enrollment. Table 4 shows the balance plot for the CEM approached used for column 1 of Table 3. Following Blackwell et al. (2009), we find the L1 measure of univariate imbalance for each variable used as described by Iacus et al. (2011). The goal of matching is to reduce the univariate distance from the unmatched to the match sample, and our matching design performs moderately well. The other balance tables for the other regressions are not shown, but perform similar to the distance reduction shown in Table 3.

Total enrollment for schools that receive a Title IX exemption increases by approximately 237 students, matching the advertising effect proposed. Colleges that enact Title IX restrictions seem to be differentiating from peer institutions, and any sort of backlash effect does not seem present. Though again, we can find no cases of schools who actively advertise their Title IX exemptions, it is likely that this signal is being transmitted through a private network (such as through churches). Though women may be more subjective to religious signals, we do not find significant evidence that the enrollment increase is driven by female (or male) enrollment.

Given the wide scope of Title IX on a campus ecosystem, a Title IX may have effects on a college beyond simply enrollment. For this reason, we perform similar CEM regressions on a variety of dependent variables. First, we examine if Title IX exemptions affect applications. Table 5 shows the results for applications regressions, with column 1 referring to total applicants, column 2 only male applicants, and column 3 female applicants. Because application data has only been collected by IPEDS relatively recently, the total number of observations are relatively small (1,955). These observations are reduced even further to 640 to accommodate the matching procedure. Nevertheless, significant results are found. Like enrollment, we see a significant increase in the total number of applicants, suggesting there is a signaling mechanism in play. Dividing total applications by gender reveals that much of this change is driven by an increase in women applying to the school. This follows some of the religion and education literature, such as Davignon (2016), who through surveys find that women are more likely than men to account for Christian identity when choosing a college. If a Title IX restriction is a signal of religious "devoutness", then it should be more likely to be received by women.

Higher enrollment could also be a sign of lower admissions standards. To test this hypothesis, Table 6 displays results for admissions rate. Column 1 shows the total admissions rate (measured between 0 and 100%), column 2 the admissions rate for male students, and column 3 the admissions rate for female students. Here, results are significant, positive, and consistent across genders. A Title IX exemption is associated with a roughly 2 percentage point increase in admissions rate across the board. This effect is somewhat small, but given that the average admissions rate is already relatively high (approximately 69%), that is not a major surprise. This also reflects the optimization by colleges. While some schools may use an increase in applications as an opportunity to raise standards and maintain capacity (Anderson, 2017, Pope and Pope, 2009), many of these schools instead choose to *lower* standards to increase enrollment.

Table 7 lists other school characteristics. Column 1 uses retention rate as the dependent variable. Column 2 use graduation rates, while columns 3 and 4 show graduation rates for male and female students,

respectively. For the entire student population, we see no changes in retention or graduation rates. However, there is a small increase in the graduation rate of women. We do not know of other internal policy changes a school may be making in conjunction with a Title IX exemption, but it is probable that Title IX exemptions coincide with other forms of community formation. Following Davignon (2016), if Christian identity is a major factor in college selection for women, a Title IX exemption could be joint with the formation of Christian community-support activities on campus, which female students may benefit from.

Title IX could also affect tuition and price of attending the school, and in turn, these could also affect enrollment. Table 8 examines various factors related to price and funding. Column 1 focuses on tuition. Column 2 examines the full price, which includes tuition, fees, and on-campus housing for an out-of-state student[18]. Columns 3 and 5 explore funding. Column 3 examines the average loan amount awarded as a percentage of total price. Column 5 examines the amount of grant aid (state and federal grants and scholarships) awarded as a percentage of full price. Column 4 examines the percentage of students awarded any financial aid. Bucking a general trend for most private colleges, schools that receive a Title IX exemption decrease their tuition by around $1,000 (about 4% of the mean). In addition, other costs, such as fees and housing, also decline. There appears to be no difference in financial aid patterns or loans. This presents a conflicting narrative compared to the results in Tables 6 and 5. One potential explanation for this could be that tuition and prices have a degree of stickiness, and may be set before filing for Title IX exemptions. It is possible that schools may be expecting some sort of backlash effect and try to set lower prices as a compensating differential. Extending this model to examine tuition and price at time t+1 reflects the traditional advertising assumptions, with tuition and price increasing.

6.1 Extensions Beyond Students

Title IX does not only apply to students. Given how Title IX can affect virtually all components of a college, we should not expect the impacts of a Title IX exemption to be limited only to students. We extend this same matching procedure to examine both faculty components and university finances.

First, one concern to this design is potential endogeneity of filing for a Title IX exemption. It is possible that some schools may file for exemptions in response to other pressures. Perhaps a Title IX exemption is a response to declining university revenues, or enrollment. To test this hypothesis, we run a simple linear probability model (LPM) Title IX exemptions as the dependent variable. We use the lagged variables for enrollment, applicants, tuition, percent female students, admissions rate, core revenues, and core revenues as regressors. In addition, we incorporate a dummy variable if the school was a member of the Council of Christian Colleges and Universities (CCCU) during the sample year[19]. Table 9 shows the results of this regression. Clustered standard errors are displayed in parenthesis. Though several variables are significant, the magnitudes of each variable is close to zero. From this, we can find no evidence that schools are filing Title IX exemptions as responses to university pressures. Results are similar when employing two year lags.

Title IX covers faculty hiring as well. We examine the effects of Title IX exemptions on faculty. Table 10 examines full-time faculty. "Faculty" can be a somewhat vague term and could also include, for example, individuals who hold primarily non-research and/or non-instructional roles (administrators, librarians, chaplains, etc.) that also teach classes. To try to include primarily teaching- and/or research-based faculty, we

[18]Though more common for public universities, a few private colleges offer different tuition prices for in-state versus out-of-state students.

[19]Membership to the CCCU stays relatively constant, but roughly a dozen schools join the organization over the sample period, with seven schools leaving the organization.

break the "faculty" sample into a series of smaller criteria. Column 1 shows results examining only tenured faculty. Column 2 examines only tenure-track faculty. Columns 3 examines specifically new (external) faculty hires. Columns 4 and 5 break the sample up into new male and female hires, respectively. Perhaps unsurprisingly, we find no change to the number of tenured faculty. The population of tenure-track faculty increase by approximately 1.56 people. This seems to reflect the increase in enrollment.

However, the number of new external hires has decreased by approximately 2.1 people. While a Title IX exemption may be interpreted as a positive signal for potential students, it appears to be a negative signal to potential faculty. This may seem irreconcilable with the results found in Column 2, but columns 3, 4, and 5 reflect *new* hires previously unaffiliated with the school. A likely explanation is that exempt colleges face difficulties when recruiting external faculty, and as a result are more likely to promote existing part-time faculty into full-time roles. Internal promotions are also more likely to be in-group and more likely to conform to the college's standards. The external hiring decrease seems to be felt more by male hires than female hires, which, like with students, may be more responsive to a Title IX exemption as a religiosity signal.

To examine the effect of Title IX exemptions on part-time faculty, Table 11 shows the results of the matching regressions. Column 1 shows total part-time faculty, Columns 2 and 3 separate by gender, and Column 4 examines part-time instructors. Exempt schools see fairly large increases in part-time enrollment (about 13.7 people, or 9% compared to the mean). Again, this seems to reflect the increase in enrollment. Examining part-time hires by gender shows that the majority of new hires are women, similar to enrollment.

Finally, we study the financial side of the college. Table 12 shows the effect of Title IX exemptions on college balance sheets. Column 1 examines core revenues, column 2 core expenses, and column 3 the total amount of gifts received. Though a Title IX exemption could serve as a "rallying cry" to drum up university donations from donors or parent churches, we find no significant evidence that gift amounts change. Revenues also do not appear to change. However, expenses seem to increase by approximately $1.6 million (approximately 4.5% of the mean). This could perhaps be explained by the increase in faculty hiring.

7 Discussion

This paper examines the first empirical analysis of an important yet widely understudied Title IX religious based exemption using a coarsened exact matching (CEM) model applied to IPEDS data that compared exempt to non-exempt religious educational institutions. Our results show that institutions that are exempt have increased application, admissions, and enrollment rates, with no notable impact on retention rates. For faculty composition, we observe that the share of tenure track faculty increases but is matched with a decline in external hires, which we infer as increased internal hiring practices. We observe no notable effects on gifts or donations, but observe a significant increase in expenses.

The results of this paper show that filing for a Title IX exemption functions as a costly, credible signal of religious commitment in a crowded market of small tuition dependent religious colleges, expanding demand from a subset of dogmatic prospective students and their families without triggering reputation backlash or public disapproval of anti-discrimination provisions.The gendered pattern in our results is consistent with prior evidence that identifies religious identity as a more salient factor in college choice for women than men. On the faculty side, the shift toward internal promotion over external hiring suggests that exemption filing raises the perceived cost of verifying an external candidate's fit with the institution's religious commitments

relative to promoting an already-vetted internal candidate.

This paper contributes to three literatures. Primarily, we provide the first outcomes based empirical evidence on the Title IX religious exemption itself, extending a literature that has so far been limited to legal and descriptive analysis. Second, we extend the literature on Title IX's institutional effects more broadly, which has concentrated on athletics, investigation and the LGBTQ+ student experience. We study this in the opposite direction, with institutions opting out of protections rather than being pushed towards compliance. Third, we contribute new evidence to the literature on faculty labor markets responding to changes in their workplace, particularly changes in their religious identity.

We acknowledge several limitations to our study, first, while we find no evidence that institutions file for exemptions in response to prior financial or enrollment distress, we cannot rule out unobserved institutional characteristics that may be correlated with the decision to file, Our outcome measures are aggregated at the institution level drawn from IPEDS, which does not allow us to observe any individual level mechanisms, specifically how students, faculty or donors are driving the composition shifts that are documented in this study. Information about this individual level compositions would allow us to more directly test the signally channel that we try to observe, Exempt institutions in this study are a specific subpopulation of American higher education, that are small, tuition dependent and predominantly Christian, our results may not be generalizable to a counterfactual in which exemptions status were more common or less denominationally homogeneous institutions. These limitations point toward several directions for future work. Individual or donor level data would allow a more direct test of the signaling and in-group network mechanisms we propose here. Finally, with courts continuing to uphold the exemption and institutions continuing to file for it, the question is no longer whether the exemption will shape American higher education, rather what that tradeoff actually costs as students and faculty lose their protections.

References

Anderson, D. J. and Cheslock, J. J. (2004). Institutional strategies to achieve gender equity in intercollegiate athletics: Does Title IX harm male athletes? *American Economic Review*, 94(2):307–311.

Anderson, M. L. (2017). The benefits of college athletic success: An application of the propensity score design. *Review of Economics and Statistics*, 99(1):119–134.

Arcidiacono, P. (2005). Affirmative action in higher education: How do admission and financial aid rules affect future earnings? *Econometrica*, 73(5):1477–1524.

Arkhangelsky, D., Athey, S., Hirshberg, D. A., Imbens, G. W., and Wager, S. (2021). Synthetic difference-in-differences. *American Economic Review*, 111(12):4088–4118.

Augustine-Adams, K. (2016). Religious exemptions to Title IX. *U. Kan. L. Rev.*, 65:327.

Back, C. J. and Cole, J. P. (2023). Title ix's religious exemption: Agency practice and judicial application — congress.gov — Library of Congress.

Bartkowski, J. P. (2001). *Remaking the Godly Marriage: Gender Negotiation in Evangelical Families*. Rutgers University Press.

Beck, D., Hersch, J., and Viscusi, W. K. (2023). Differences by race and ethnicity in Title IX's effect on women's health. *Journal of Benefit-Cost Analysis*, 14(3):437–450.

Becker, S. O. and Woessmann, L. (2009). Was Weber wrong? A human capital theory of Protestant economic history. *The Quarterly Journal of Economics*, 124(2):531–596.

Behrman, J. R., Rosenzweig, M. R., and Taubman, P. (1996). College choice and wages: Estimates using data on female twins. *The Review of Economics and Statistics*, pages 672–685.

Bettinger, E. P. and Long, B. T. (2010). Does cheaper mean better? The impact of using adjunct instructors on student outcomes. *The Review of Economics and Statistics*, 92(3):598–613.

Blackwell, M., Iacus, S., King, G., and Porro, G. (2009). cem: Coarsened exact matching in Stata. *The Stata Journal*, 9(4):524–546.

Callaway, B. and Sant'Anna, P. H. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, 225(2):200–230.

Chade, H., Lewis, G., and Smith, L. (2014). Student portfolios and the college admissions problem. *Review of Economic Studies*, 81(3):971–1002.

Cohen-Zada, D. and Justman, M. (2019). The religious factor in private education in the United States. In *Advances in the Economics of Religion*, pages 197–213. Springer.

Cohen-Zada, D. and Sander, W. (2008). Religion, religiosity and private school choice: Implications for estimating the effectiveness of private schools. *Journal of Urban Economics*, 64(1):85–100.

Darnell, A. and Sherkat, D. E. (1997). The impact of Protestant fundamentalism on educational attainment. *American Sociological Review*, pages 306–315.

Davignon, P. (2016). Factors influencing college choice and satisfaction among students at Christian colleges and universities. *Religion & Education*, 43(1):77–94.

Department of Education (2016). Religious Exemption Index.

Eble, A. and Hu, F. (2025). Signals, information, and the value of college names. *Review of Economics and Statistics*, 107(2):355–371.

Ecklund, E. H. and Scheitle, C. P. (2007). Religion among academic scientists: Distinctions, disciplines, and demographics. *Social problems*, 54(2):289–307.

Epple, D., Romano, R., and Sieg, H. (2006). Admission, tuition, and financial aid policies in the market for higher education. *Econometrica*, 74(4):885–928.

Faust, E. S. (2017). Who decides: The title ix religious exemption and administrative authority. *BYU L. Rev.*, page 1197.

Fu, C. (2014). Equilibrium tuition, applications, admissions, and enrollment in the college market. *Journal of Political Economy*, 122(2):225–281.

Gilpin, G. A., Saunders, J., and Stoddard, C. (2015). Why has for-profit colleges' share of higher education expanded so rapidly? Estimating the responsiveness to labor market changes. *Economics of Education Review*, 45:53–63.

Gross, N. and Simmons, S. (2009). The religiosity of American college and university professors. *Sociology of Religion*, 70(2):101–129.

Hill, J. P. (2011). Faith and understanding: Specifying the impact of higher education on religious belief. *Journal for the Scientific Study of Religion*, 50(3):533–551.

Horwitz, I. M. (2021). Religion and academic achievement: A research review spanning secondary school and higher education. *Review of Religious Research*, 63(1):107–154.

Howell, J. S. (2010). Assessing the impact of eliminating affirmative action in higher education. *Journal of Labor Economics*, 28(1):113–166.

Iacus, S. M., King, G., and Porro, G. (2011). Multivariate matching methods that are monotonic imbalance bounding. *Journal of the American Statistical Association*, 106(493):345–361.

Iacus, S. M., King, G., and Porro, G. (2012). Causal inference without balance checking: Coarsened exact

matching. *Political Analysis*, 20(1):1–24.

Iannaccone, L. R. (1992). Sacrifice and stigma: Reducing free-riding in cults, communes, and other collectives. *Journal of Political Economy*, 100(2):271–291.

Iannaccone, L. R. (1994). Why strict churches are strong. *American Journal of Sociology*, 99(5):1180–1211.

Iannaccone, L. R. (1998). Introduction to the economics of religion. *Journal of Economic Literature*, 36(3):1465–1495.

Iyer, G., Soberman, D., and Villas-Boas, J. M. (2005). The targeting of advertising. *Marketing Science*, 24(3):461–476.

Iyer, S. (2016). The new economics of religion. *Journal of Economic Literature*, 54(2):395–441.

Johnson, C. and McCannon, B. C. (2022). Athletics and admissions: the impact of the Penn State football scandal on student quality. *Journal of Sports Economics*, 23(2):200–221.

Kaestner, R. and Xu, X. (2006). Effects of Title IX and sports participation on girls physical activity and weight. In Bolin, K. and Cawley, J., editors, *Advances in Health Economics and Health Services Research: The Economics of Obesity*. Emerald Group Publishing Limited.

Kaestner, R. and Xu, X. (2010). Title IX, girls' sports participation, and adult female physical activity and weight. *Evaluation Review*, 34(1):52–78.

Kapor, A. (2025). Transparency and percent plans. *Econometrica*, 93(6):2123–2157.

Lee, J. (2025). Updated title ix religious exemptions list. *The Pregnant Scholar*.

Lindo, J. M., Marcotte, D. E., Palmer, J. E., and Swensen, I. D. (2019). Any press is good press? The unanticipated effects of Title IX investigations on university outcomes. *Economics of Education Review*, 73:101934.

Lucca, D. O., Nadauld, T., and Shen, K. (2019). Credit supply and the rise in college tuition: Evidence from the expansion in federal student aid programs. *The Review of Financial Studies*, 32(2):423–466.

Manski, C. F. and Wise, D. A. (1983). *College Choice in America*. Harvard University Press.

McPhetres, J. and Zuckerman, M. (2018). Religiosity predicts negative attitudes towards science and lower levels of science literacy. *PloS one*, 13(11):e0207125.

Meer, J. and Rosen, H. S. (2009). Altruism and the child cycle of alumni donations. *American Economic Journal: Economic Policy*, 1(1):258–286.

Milgrom, P. and Roberts, J. (1986). Price and advertising signals of product quality. *Journal of Political Economy*, 94(4):796–821.

Nightingale, S. (2021). "it probably hurt more than it helped": LGBTQ survivors of sexual assault and their experience with the college Title IX reporting process. *Advances in Social Work*, 21(4):1280–1299.

Pope, D. G. and Pope, J. C. (2009). The impact of college sports success on the quantity and quality of student applications. *Southern Economic Journal*, 75(3):750–780.

Reilly, P., Williams, K., and Das, M. (2024). The effects of Title IX enforcement on sexual assaults on college campuses. *Contemporary Economic Policy*, 42(4):705–721.

Rose-Ackerman, S. (1987). Ideals versus dollars: Donors, charity managers, and government grants. *Journal of Political Economy*, 95(4):810–823.

Rose-Ackerman, S. (1996). Altruism, nonprofits, and economic theory. *Journal of Economic Literature*, 34(2):701–728.

Sorensen, E., De Mars, S., and McArdle, D. (2025). Students, student-athletes, and the Title IX religious exemption. *J. Legal Aspects Sport*, 35:102.

Stark, R. and Finke, R. (2000). *Acts of faith: Explaining the human side of religion*. Univ of California

Press.

Stevenson, B. (2007). Title IX and the evolution of high school sports. *Contemporary Economic Policy*, 25(4):486–505.

Stevenson, B. (2010). Beyond the classroom: Using Title IX to measure the return to high school sports. *The Review of Economics and Statistics*, 92(2):284–301.

Uecker, J. E. and Pearce, L. D. (2017). Conservative Protestantism and horizontal stratification in education: The case of college selectivity. *Social Forces*, 96(2):661–690.

Yang, J. (2025). Queer students and religious identity salience: Legal challenges and a call for inclusivity. *Journal of Homosexuality*, 72(12):2420–2440.

Table 1: Title IX exempt schools

School	Affiliation	Exemption Granted	School	Affiliation	Exemption Granted
Anderson University (IN)	Church of God (Anderson)	2014	Kentucky Mountain Bible College (KY)	Kentucky Mountain Holiness Association	2017
Appalachian Bible College (WV)	Nondenominational Christian	2017	Lancaster Bible College (PA)	Nondenominational Christian	2016
Asbury Theological Seminary (KY)	Wesleyan Holiness Connection	2016	Latin American Bible Institute (CA)	Assemblies of God USA	2020
Baptist Missionary Association Theological Seminary (TX)	Baptist Missionary Association of America	2017	Liberty University (VA)	Southern Baptist Convention	2014
Bethany Global University (MN)	Evangelical Christian	2017	Life Pacific University (CA)	Foursquare Church	2017
Bethel University (IN)	Missionary Church	2015	Louisiana Christian University (LA)	Southern Baptist Convention	2015
Bethel University (TN)	Cumberland Presbyterian Church	2020	Manhattan Christian College (KS)	Churches of Christ	2016
Blue Mountain Christian University (MS)	Southern Baptist Convention	2015	Maranatha Baptist University (WI)	Independent Baptist	2013
Bob Jones University (SC)	Evangelical Christian	2018	Mississippi College (MS)	Southern Baptist Convention	2015
Boston Baptist College (MA)	Baptist Bible Fellowship International	2017	Missouri Baptist University (MO)	Southern Baptist Convention	2016
Brewton-Parker College (GA)	Southern Baptist Convention	2016	Multnomah University (OR)	Nondenominational Christian	2016
Brigham Young University (UT)	Church of Jesus Christ of Latter-Day Saints	2022	North Greenville University (SC)	Southern Baptist Convention	2015
Brigham Young University-Hawaii (HI)	Church of Jesus Christ of Latter-Day Saints	2022	Northpoint Bible College (MA)	Assemblies of God USA	2016
Brigham Young University-Idaho (ID)	Church of Jesus Christ of Latter-Day Saints	2015	Northwest Nazarene University (ID)	Church of the Nazarene	2014
Bryan College (TN)	Nondenominational Christian	2016	Oak Hills Christian College (MN)	Evangelical Christian	2017
Cairn University (PA)	Nondenominational Christian	2017	Oak Valley College (CA)	Nondenominational Christian	2022
Carson-Newman University (TN)	Southern Baptist Convention	2015	Ohio Christian University (OH)	Churches of Christ in Christian Union	2016
Central Christian College of the Bible (MO)	Churches of Christ	2016	Oklahoma Baptist University (OK)	Southern Baptist Convention	2014
Charleston Southern University (SC)	Southern Baptist Convention	2014	Oklahoma Christian University (OK)	Churches of Christ	2014
Charlotte Christian College and Theological Seminary (NC)	Nondenominational Christian	2017	Oklahoma Wesleyan University (OK)	Wesleyan Church	2014
Clarks Summit University (PA)	General Association of Regular Baptist Churches	2022	Oral Roberts University (OK)	Evangelical Christian	2017
Clear Creek Baptist Bible College (KY)	Southern Baptist Convention	2016	Ozark Christian College (MO)	Churches of Christ	2016
College of Biblical Studies (TX)	Evangelical Christian	2017	Pontifical Catholic University of Puerto Rico-Arecibo (PR)	Roman Catholic	2016
College of the Ozarks (MO)	Nondenominational Christian	2017	Pontifical Catholic University of Puerto Rico-Mayaguez (PR)	Roman Catholic	2016
Colorado Christian University (CO)	Nondenominational Christian	2016	Pontifical Catholic University of Puerto Rico-Ponce (PR)	Roman Catholic	2016
Columbia International University (SC)	Nondenominational Christian	2022	Presbyterian Theological Seminary in America (CA)	Korean Presbyterian Church Abroad	2021
Compass College of Film and Media (MI)	Nondenominational Christian	2017	Randall University (OK)	National Association of Free Will Baptists	2017
Covenant College (GA)	Presbyterian Church in America	2015	Regent University (VA)	Evangelical Christian	2022
Criswell College (TX)	Southern Baptist Convention	2016	Shepherds Theological Seminary (NC)	Nondenominational Christian	2017
Crown College (MN)	Alliance World Fellowship	2016	Shorter University (GA)	Southern Baptist Convention	2016
Dallas Baptist University (TX)	Baptist General Convention of Texas	2017	Southern Baptist Theological Seminary (NC)	Southern Baptist Convention	2015
Dallas Theological Seminary (TX)	Evangelical Christian	2018	Southern Nazarene University (OK)	Church of the Nazarene	2015
Dordt University (IA)	Christian Reformed Church in North America	2016	Southern Wesleyan University (SC)	Wesleyan Church	2014
East Texas Baptist University (TX)	Baptist General Convention of Texas	2015	Southwest Baptist University (MO)	Southern Baptist Convention	2015
Elim Bible Institute and College (NY)	Elim Fellowship	2017	Southwestern Assemblies of God University	Assemblies of God USA	2016
Emmanuel College (MA)	Roman Catholic	2017	Spring Arbor University (MI)	Free Methodist Church	2014
Ensign College (UT)	Church of Jesus Christ of Latter-Day Saints	2022	Sterling College (KS)	Evangelical Christian	2017
Erskine College (SC)	Associate Reformed Presbyterian Church	2017	Taylor University (IN)	Evangelical Christian	2018
Evangel University (MO)	Assemblies of God USA	2017	The Baptist College of Florida (FL)	Southern Baptist Convention	2014
Faith Baptist Bible College and Theological Seminary (IA)	Nondenominational Christian	2017	Toccoa Falls College (GA)	Alliance World Fellowship	2015
Family of Faith Christian University (OK)	Nondenominational Christian	2017	Trinity Bible College and Graduate School (ND)	Assemblies of God USA	2016
Florida College (FL)	Nondenominational Christian	2017	Truett McConnell University (GA)	Southern Baptist Convention	2016
Freed-Hardeman University (TN)	Churches of Christ	2016	Union University (TN)	Southern Baptist Convention	2014
Fresno Pacific University (CA)	US Conference of Mennonite Brethren Churches	2015	University of Mary (ND)	Roman Catholic	2020
Geneva College (PA)	Reformed Presbyterian Church in North America	2015	University of Mary Hardin-Baylor (TX)	Baptist General Convention of Texas	2014
Grace Christian University (MI)	Grace Gospel Fellowship	2017	University of Mobile (AL)	Southern Baptist Convention	2015
Hannibal-LaGrange University (MO)	Southern Baptist Convention	2015	University of Northwestern-St Paul	Nondenominational Christian	2016
Hardin-Simmons University (TX)	Baptist General Convention of Texas	2015	University of the Cumberlands (KY)	Southern Baptist Convention	2014
Houston Baptist University (TX)	Baptist General Convention of Texas	2017	Wayland Baptist University (TX)	Baptist General Convention of Texas	2015
Howard Payne University (TX)	Baptist General Convention of Texas	2015	William Carey University (MS)	Southern Baptist Convention	2015
Indiana Wesleyan University (IN)	Wesleyan Church	2016	William Jessup University (CA)	Churches of Christ	2016
John Paul the Great Catholic University (CA)	Roman Catholic	2015	Williams Baptist University (AR)	Southern Baptist Convention	2014
Judson University (IL)	American Baptist Churches USA	2017			

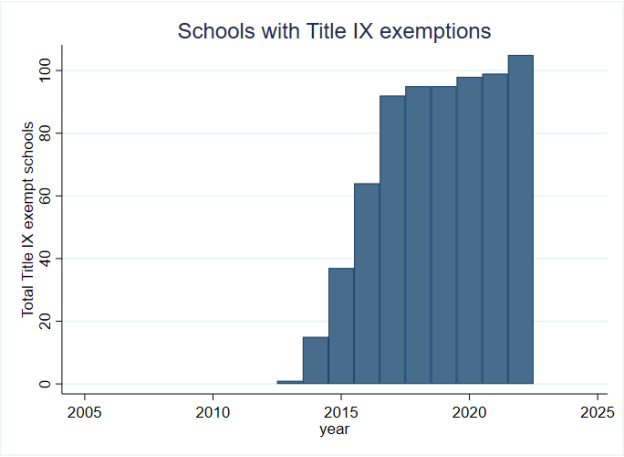


Figure 1: Title IX-Exempt Schools By Year

Table 2: Summary Statistics

Variable	**Obs.**	**Mean**	**Std. Dev.**	**Min**	**Max**
Title IX exempt	16,667	0.042	0.201	0	1
Total Enrollment	16,665	2,122	3,795	8	96,709
Pct. Students Male	3,273	39.29	13.84	0	100
Pct. Students Female	16,665	52.85	21.09	0	100
Pct. Students Black	16,665	13.62	20.49	0	100
Admissions Rate	12,632	69.53	18.51	0	100
Admissions Rate Male	12,339	68.53	18.85	0	100
Admissions Rate Female	11,586	69.02	18.61	0	100
Total Applicants	1,955	2,888	2,636	197	33,435
Total Male Applicants	1,955	1,216	1,098	0	13,161
Total Female Applicants	1,955	1,668	1,616	0	20,699
Retention Rate	14,245	72.57	14.89	0	100
Graduation Rate	14,177	51.83	20.30	0	100
Graduation Rate Men	13,694	47.58	21.73	0	100
Graduation Rate Women	12,858	56.88	18.91	0	100
Tuition	12,275	23,364	11,677	866	68,365
Full Price (out-of-state, on-campus)	12,805	35,669	13,947	4,325	86,984
Pct. Students Awarded Financial Aid	14,389	92.24	15.39	0	100
Pct. Price Covered by Financial Aid	12,431	0.415	0.141	0.005	3.256
Average Loan Amount Awarded	12,826	6,581	2,141	200	21,731
Pct. Price Covered by Loans	11,229	0.198	0.084	0.007	1.356
ACT 75th Percentile	1,611	26.22	2.873	14	34
ACT 25th Percentile	1,611	20.63	2.872	13	32
Tenured Faculty	6,160	69.16	96.27	1	870
Tenure-Track Faculty	5,867	35.78	42.49	1	633
New Hires Total	5,706	10.11	17.64	1	405
New Hires Men	5,706	4.562	8.037	0	157
New Hires Women	5,706	5.547	10.12	0	248
Part-Time Faculty Total	9,003	147.6	204.9	1	4,208
Part-Time Faculty Men	9,003	66.99	97.57	0	2,112
Part-Time Faculty Women	9,003	80.63	111.5	0	2,096
Part-Time Instructors	8,607	115.4	172.6	1	3,075
Average FT Faculty Salary	16,276	55,271	18,237	500	166,620
Core Revenues	16,692	38,700,000	130,000,000	0	7,790,000,000
Core Expenses	16,692	33,200,000	92,400,000	0	1,960,000,000
Total Gifts Awarded	16,532	8,460,994	36,400,000	0	1,190,000,000
CCCU Member	16,649	0.112	0.315	0	1

Table 3: CEM Regression Results - Enrollment

Variable	Enrollment Total (1)	Enrollment Men (2)	Enrollment Women (3)
Title IX exemption	237.3***	76.08	89.59
	(83.96)	(125.0)	(191.0)
Schools FEs	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes
R^2	0.880	0.880	0.900
Obs.	4,473	8,305	8,305

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, tuition, admissions rate, percent of students female (for column 1), retention rate, core revenues, and core expenses.

Table 4: Balance Table for CEM regressions - Total Enrollment

Variable	L1 Univariate Imbalance (Unmatched)	L1 Univariate Imbalance (Matched)
Lagged tuition	0.235	0.115
Lagged pct. female	0.176	0.063
Lagged admissions rate	0.169	0.099
Lagged retention rate	0.173	0.112
Lagged core revenues	0.089	0.150
Lagged core expenses	0.125	0.183
Total multivariate L1 imbalance	0.999	0.987

Table 5: CEM Regression Results - Applications

Variable	Applicants Total (1)	Applicants Men (2)	Applicants Women (3)
Title IX exemption	634.7***	115.2	523.3***
	(203.3)	(71.69)	(139.5)
Schools FEs	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes
R^2	0.881	0.907	0.869
Obs.	640	640	640

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, tuition, admissions rate, percent of students female, retention rate, core revenues, and core expenses.

Table 6: CEM Regression Results - Admissions Rate

Variable	Admissions Rate Total (1)	Admissions Rate Men (2)	Admissions Rate Women (3)
Title IX exemption	2.084***	2.270***	2.241***
	(0.799)	(0.824)	(0.836)
Schools FEs	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes
R^2	0.619	0.566	0.561
Obs.	6,910	6,892	6,831

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, tuition, admissions rate, percent of students female, retention rate, core revenues, and core expenses.

Table 7: CEM Regression Results - Retention and Graduation Rates

Variable	Retention Rate (1)	Graduation Rate (2)	Graduation Rate Men (3)	Graduation Rate Women (4)
Title IX exemption	-0.123	-0.177	-1.010	1.395**
	(0.559)	(0.586)	(0.725)	(0.672)
Schools FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
R^2	0.603	0.853	0.811	0.810
Obs.	7,731	4,184	4,168	4,135

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, tuition, admissions rate, percent of students female, retention rate (except column 1), core revenues, and core expenses.

Table 8: CEM Regression Results - Tuition, Price, and Financial Aid

Variable	Tuition (1)	Full Price (Tuition, fees, on-campus housing) (2)	Average Loan Amount Awarded (Pct. of Price) (3)	Percent of Students Awarded Financial Aid (4)	Average Grant Amount Awarded (Pct. of Price) (5)
Title IX exemption	-1,020***	-1,773***	-0.002	-0.657	-0.011
	(137.4)	(226.0)	(0.004)	(0.511)	(0.007)
Schools FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
R^2	0.958	0.917	0.523	0.571	0.568
Obs.	8,403	8,632	8,269	9,465	8,476

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, admissions rate, percent of students female, retention rate, core revenues, and core expenses.

Table 9: Determinants of Title IX Exemption

Variable	LPM (1)
Lagged enrollment	0.00003*
	(0.00002)
Lagged applicants	-0.0000008
	(0.000006)
CCCU member	-0.006
	(0.015)
Lagged tuition	0.000005***
	(0.000001)
Lagged pct. women	0.0008*
	(0.0004)
Lagged pct. admitted	0.0009
	(0.0007)
Lagged retention rate	0.002*
	(0.001)
Lagged core revenues	0.000000002
	(0.000000007)
Lagged core expenses	-0.000000002
	(0.000000007)
Year FEs	Yes
School FEs	Yes
Constant	-0.404**
	(0.157)
Obs.	1,767

Clustered (school) standard errors in parentheses.
*, **, and *** corresponds to 0.1,0.05, and 0.01 significance levels, respectively

Table 10: CEM Regression Results - Full-Time Faculty

Variable	Tenured Faculty (1)	Tenure-Track Faculty (2)	New Hires Total (3)	New Hires Men (4)	New Hires Women (5)
Title IX exemption	-0.220	1.555**	-2.124***	-1.609***	-0.515*
	(0.598)	(0.779)	(0.452)	(0.259)	(0.301)
Schools FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
R^2	0.970	0.920	0.714	0.651	0.666
Obs.	3,809	3,623	3,803	3,803	3,803

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, tuition, admissions rate, percent of students female, retention rate, core revenues, and core expenses

Table 11: CEM Regression Results - Part-Time Faculty

Variable	Part-Time Faculty Total (1)	Part-Time Faculty Men (2)	Part-Time Faculty Women (3)	Part-Time Instructors (4)
Title IX exemption	13.74***	4.073***	9.666***	9.106***
	(3.283)	(1.592)	(1.878)	(2.748)
Schools FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
R^2	0.918	0.914	0.914	0.929
Obs.	5,870	5,870	5,870	5,657

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, tuition, admissions rate, percent of students female, retention rate, core revenues, and core expenses

Table 12: CEM Regression Results - Finances and Gifts

Variable	Core Revenues (1)	Core Expenses (2)	Total Gifts (3)
Title IX exemption	1,443440	1,580,024**	1,245,325
	(1,108,086)	(772,374)	(1,872,423)
Schools FEs	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes
R^2	0.956	0.972	0.793
Obs.	4,594	4,594	4,542

Standard errors in parentheses. *, **, and *** corresponds to 0.1, 0.05, and 0.01 significance levels, respectively. Matching based on lagged values of enrollment, tuition, admissions rate, percent of students female, and retention rate.